

## DAFTAR PUSTAKA

- Abdulmalik Ali, Mansurat Golden. (2019). "Presence And Characterization of Microplastics In Drinking (Tap/Bottled) Water and Soft Drink". Thesis dan Desertasi. UND Scholary Commons
- Ageel, H. K., Harrad, S., & Abdallah, M. A. E. (2022). Occurrence, human exposure, and risk of microplastiks in the indoor environment. In *Environmental Science: Processes and Impacts* (Vol. 24, Issue 1, pp. 17–31). Royal Society of Chemistry. <https://doi.org/10.1039/d1em00301a>
- Amaludin, Amaludin (2022) Gambaran Frekuensi Pencucian Galon Dengan Mesin Sikat Terhadap Kandungan Mikroplastik Air Minum Isi Ulang (Amiu) Tahun 2022. Skripsi thesis, Universitas Hasanuddin. <http://repository.unhas.ac.id/id/eprint/18284/>
- Amobonye, A., Bhagwat, P., Singh, S., and Pillai, S. (2020). Plastik biodegradation: frontline microbes and their enzymes. *Sci. Total Environ.* 759:143536
- Anagnosti, L., Varvaresou, A., Pavlou, P., Protopapa, E., and Carayanni, V. (2021). Worldwide actions against plastik pollution from microbeads and microplastiks in cosmetics focusing on European policies. Has the issue been handled effectively? *Mar. Pollut. Bull.* 162:111883. doi: 10.1016/j.marpolbul.2020.111883
- Anggraini, Farida, Andi Anwar, and Risva Risva. 2019. "Analisis Risiko Kesehatan Lingkungan Non-Karsinogenik Tembaa Pada Ikan Nila Keramba Yang Dikonsumsi Dan Dibudidayakan Masyarakat Di Desa Jembayan." *Higiene: Jurnal Kesehatan Lingkungan* 5 (1): 14–21. <http://journal.uin-alauddin.ac.id/index.php/higiene/article/view/6778>.
- Alva S , Linda T , Sicilia K. 2022. Mikroplastik sebagai Kontaminan Anyar dan Efek Toksiknya terhadap Kesehatan. *Jurnal Kesehatan* Volume 13, Nomor 1, Tahun 2022 ISSN 2086-7751 (Print), ISSN 2548-5695 (Online) <http://ejurnal.poltekkes-tjk.ac.id/index.php/JK>
- A'yun, N., Q, 2019. Analisis Mikroplastik Menggunakan Ft-Ir Pada Air, Sedimen, dan Ikan Belanak (*Mugil Cephalus*) di Segmen Sungai Bengawan Solo Yang Melintasi Kabupaten Gresik. Skripsi Universitas Islam Negeri Sunan Ampel Surabaya. Skripsi. [Online] <http://digilib.uinsby.ac.id/>
- Bach, C., Dauchy, X., Severin, I., Munoz, J.-F., Etienne, S., & Cagnon, M.-C. (2014). Effect of Sunlight Exposure on The Release of Intentionally and / or Non-intentionally Added Substance from Polyethylene Terephthalate (PET) Bottles into Water: Chemical Analysis and In Vitro Toxicity. *Elsevier: Food Chemistry*, 63-71

- Calero, M., Godoy, V., Quesada, L., and Martín-Lara, M. Á. (2021). Green strategies for microplastics reduction. *Curr. Opin. Gr. Sustain. Chem.* 28:100442. doi: 10.1016/j.cogsc.2020.100442
- Campanale, C., Massarelli, C., Savino, I., Locaputo, V., & Uricchio, V. F. (2020). A Detailed Review Study on Potential Effects of Microplastics and Additives of Concern on Human Health. *MDPI International Journal of Environmental Research and Public Health*, 1-26
- Defri, Y., Mahatma, F. Z., Arif, Z. F., Yuniar, P. P., Ledhyane, I. H., (2021). Mikroplastik Di Perairan (Jenis, Metode sampling dan Analisa Laboratorium. Cetakan Pertama. Penerbit: UB Press. Malang
- Direktorat Jenderal PP dan PL Kementerian Kesehatan 2012. Pedoman Analisis Risiko Kesehatan Lingkungan (ARKL). Bakti Husada, Hal 1-82.
- Dronjak, L., Exposito, N., Rovira, J., Florencio, K., Emiliano, P., Corzo, B., Schuhmacher, M., Valero, F., & Sierra, J. (2022). Screening of microplastics in water and sludge lines of a drinking water treatment plant in Catalonia, Spain. *Water Research*, 225. <https://doi.org/10.1016/j.watres.2022.119185>
- Dutta, A. (2017). Fourier Transform Infrared Spectroscopy. In *Spectroscopic Methods for Nanomaterials Characterization* (Vol. 2). Elsevier Inc. <https://doi.org/10.1016/B978-0-323-46140-5.00004-2>
- Fatimah, A., Mohammad. A., Ozeas. C., Majeda. K. (2017). Impact Of Temperature And Storage Time In The Migration Of Antimony From Polyethylene Terephthalate (PET) Containers Into Bottled Water In Qatar. *Environmental Monitoring and Assessment*. 189(12):631. DOI:10.1007/s10661-017-6342-3
- Ferraz, M., Bauer, A. L., Valiati, V. H., & Schulz, U. H. (2020). Microplastic concentrations in raw and drinking water in the sinos river, southern brazil. *Water* (Switzerland), 12(11), 1–10. <https://doi.org/10.3390/w12113115> <https://www.mdpi.com/2073-4441/12/11/3115>
- FSIS, 2012. Microbial Risk Assessment Guideline: Pathogenic Organisms with Focus on Food and Water. Tersedia pada: [https://www.fsis.usda.gov/sites/default/files/media\\_file/202007/Microbial\\_Risk\\_Assessment\\_Guideline\\_2012-001.pdf](https://www.fsis.usda.gov/sites/default/files/media_file/202007/Microbial_Risk_Assessment_Guideline_2012-001.pdf)
- Geneva: World Health Organization; 2019. 1393. Microplastik In Water WHO
- Girikallop, Grace Glory, Woodford B. S. Joseph, and Sri Seprianto Maddusa. 2022. "Analisis Risiko Kesehatan Lingkungan Paparan Logam Berat Cadmium (Cd) Pada Masyarakat Sekitar Sungai Yang Mengonsumsi Ikan Nilem (Ostoechillus Vittatus) Dari Sungai Desa Bakan Kecamatan Lolayan Kabupaten Bolaang Mongondow." *Jurnal Kesmas* 11 (2): 90–96.

- Hesselink, Tom, Emiel van Duuren, and KPMG Netherlands. 2019. "The Plastik Recycling Opportunity in the Netherlands.
- Handayani, R. (2020) Kajian Literatur Kandungan Mikroplastik pada Air Minum dalam Kemasan (Amdk). Universitas Andalas Padang. Available at: <http://scholar.unand.ac.id/60566/>
- Hoegh-Guldberg, Ove et al. 2015. "Plastik Wate Inputs from Land into the Ocean." *Science* (September 2014): 1655–1734.
- Horton, A. A., Walton, A., Spurgeon, D. J., Lahive, E., & Svendsen, C. (2017). Microplastiks in freshwater and terrestrial environments: Evaluating the current understanding to identify the knowledge gaps and future research priorities. *Science of the Total Environment*, 586, 127–141. <https://doi.org/10.1016/j.scitotenv.2017.01.190>
- Inghelbrecht, S., dan Remon, JP (1998). Pemadatan rol dan pembuatan tablet campuran obat selulosa mikrokristalin. *Int. J. Farmasi*. 161 (2), 215–224. doi:10.1016/s0378-5173(97)00356-6
- Isma, N, F., Danira, R, W. (2022). Kelimpahan dan Karakteristik Mikroplastik pada Air Minum serta Potensi Dampaknya terhadap Kesehatan Manusia. *Gunung Djati Conference Series*, Volume 7. Prosiding Seminar Nasional Kimia 2021ISSN: 2774-6585. <https://conferences.uinsgd.ac.id/index.php>
- Junjie, Z., Lei, W., Leonardo, T., Kurunthachalam, K. 2021. Occurrence of Polyethylene Terephthalate and Polycarbonate Microplastiks in Infant and Adult Feces. *Ecotoxicology and Public Health*. <https://doi.org/10.1021/acs.estlett.1c00559>
- Juwitriani Alwi, Yasnani, Ainurafiq. 2016. "Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Timbal (Pb) Pada Masyarakat Yang Mengkonsumsi Kerang Kalandue (Polymesoda Erosa) Dari Tambak Sekita Sungai Wanggu Dan Muara Teluk Kendari," 1–15.
- Kirstein, I. v., Gomiero, A., & Vollertsen, J. (2021). Microplastik pollution in drinking water. In *Current Opinion in Toxicology* (Vol. 28, pp. 70–75). Elsevier B.V. <https://doi.org/10.1016/j.cotox.2021.09.003>
- Kirstein, I. v., Hensel, F., Gomiero, A., Iordachescu, L., Vianello, A., Wittgren, H. B., & Vollertsen, J. (2021). Drinking plastiks? – Quantification and qualification of microplastiks in drinking water distribution systems by μFTIR and Py-GCMS. *Water Research*, 188. <https://doi.org/10.1016/j.watres.2020.116519>
- Kumar, S., Chiemchaisri, C., dan Mudhoo, A. (2011). Teknologi TPA bioreaktor dalam pengolahan limbah padat kota: Tinjauan umum. *Kritik. Pendeta Biotechnol*. 31 (1), 77–97. doi:10.3109/07388551.2010.492206
- Machrany, S., Anwar, D., Fajaruddin, N. (2021). Identifikasi keberadaan Dan Bentuk Mikroplastik Pada Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar. Hasanuddin Journal of Public Health.

- Vol 2 No 2. hh: 346-354.  
 Doi:<https://dx.doi.org/10.30597/hjph.v2i3.11971>
- Madadian, E., Haelssig, JB, dan Pegg, M. (2020). Perbandingan strategi pemrosesan termal untuk reklamasi TPA: Metode, produk, dan jalur ke depan yang menjanjikan. *Sumber Daya. Daur Ulang Konservasi.* 160, 104876.doi:10.1016/j.resconrec.2020.104876
- Mallongi, A., Dullah A.A.M. 2014. Teknik Penyehatan Lingkungan. Yogyakarta: Smart Writing an Kesehatan. Jakarta: Kencana Prenada Media Group.
- Martinho, G., Balaia, N., and Pires, A. (2017). The Portuguese plastik carrier bag tax: The effects on consumers' behavior. *Waste Manag.* 61, 3–12. doi: 10.1016/j.wasman.2017.01.023
- Mar`atusholihah., Yulinah, T., Arlini, D, R. (2020). Kelimpahan Dan Karakteristik Mikroplastik Pada Ipam Karangpilang Iii Kota Surabaya. *Jurnal Teknik Its.* Vol 9 No 2. Doi: [10.12962/J23373539.V9i2.55473](https://doi.org/10.12962/J23373539.V9i2.55473)
- Mason, S. A., Welch, V. G., & Neratko, J. (2018). Synthetic Polymer Contamination in Bottled Water. *Frontiers in Chemistry,* 6(September). <https://doi.org/10.3389/fchem.2018.00407>
- Monteleone, Adrian, Weronika Schary, Andreas Fath, and Folker Wenzel. 2019. "Validation of an Extraction Method for Microplastiks from Human Materials." *Clinical Hemorheology and Microcirculation:* 1–15
- Muhammad, N. A. (2020). Identifikasi Kandungan Mikroplastik Pada Air Minum Isi Ulang Di Kecamatan Gunung Anyar Surabaya. Skripsi. Universitas Pembangunan Nasional "Veteran" Jatim Surabaya. [online]. <http://repository.upnjatim.ac.id/1099/1/Cover.PDF>
- Munir, MAM, Yousaf, B., Ali, MU, Dan, C., Abbas, Q., Arif, M., dkk. (2021). *Sintesis mikro-plastik in situ* tertanam limbah-lumpur co-pirolisis biochar: Implikasi untuk remediasi ketersediaan Cr dan Pb dan aktivitas enzimatik dari tanah yang terkontaminasi. *J.Bersih. Melecut.* 302,127005.doi:10.1016/j.jclepro. 2021.127005
- Nair, L. S., & Laurencin, C. T. (2006). Polymers as biomaterials for tissue engineering and controlled drug delivery. *Advances in Biochemical Engineering/Biotechnology,* 102(October 2005), 47–90. <https://doi.org/10.1007/b137240>
- Notoatmodjo, S. (2010). Metodelogi Penelitian Kesehatan. Jakarta. Penerbit: Rineka Cipta
- Nur Faujiah, I., Ira Ryski Wahyuni, D., Kunci, K., Minum Kemasan, A., & Minum Isi Ulang, A. (2022). Prosiding Seminar Nasional Kimia 2021. *Gunung Djati Conference Series,* 7.

- Nurul Rafiqua. (2020). Dampak Sampah Plastik yang Menghantui Lingkungan dan Kesehatan. (online). <https://www.sehatq.com/artikel/dampak-sampah-plastik-yang-menghantui-lingkungan-dan-kesehatan>
- Plastics Europe (2019). Plastics - the Facts 2019. An analysis of European plastics production, demand and waste data. [Update 2023 January 23]
- Pivokonsky, M., Cermakova, L., Novotna, K., Peer, P., Cajthaml, T., & Janda, V. (2018). Occurrence of microplastics in raw and treated drinking water. *Science of the Total Environment*, 643, 1644–1651. <https://doi.org/10.1016/j.scitotenv.2018.08.102>  
<https://pubmed.ncbi.nlm.nih.gov/30104017/>
- Ogunola, O. S., Onada, O. A., and Falaye, A. E. (2018). Mitigation measures to avert the impacts of plastiks and microplastiks in the marine environment (a review). *Environ. Sci. Pol.* 25, 9293–9310. doi: 10.1007/s11356-018-1499-z
- Posel, N., et al., 2017. Ocean Atlas Facts and Figures on The Threat to Our Marine Ecosystems. Kiel, Germany: Heinrich Böll Foundation Schleswig-Holstein. [Online] <https://www.boell.de/en/2017/05/30/ocean-atlas-facts-and-figures-about-our-relationship-with-the-ocean>.
- Rizkia, P. N & Hendrasarie, N. (2022). Penurunan Kadar Mikroplastik Tipe Serat Pada Limbah Laundry Degan Metode Elektrokoagulasi. *Serambi Engineering*, 7(3),3516-3524.
- Rochman, C. M., Browne, M. A., Underwood, A. J., Van Franeker, J. A., Thompson, R. C., & Amaral-Zettler, L. A. (2016). The ecological impacts of marine debris: unraveling the demonstrated evidence from what is perceived. *Ecology*, 97(2), 302-312.
- Safitri W. (2015). Selain ukuran berat badan mempengaruhi nutrien dalam tubuh manusia, orang yang mempunyai berat badan ideal akan mempunyai nutrisi yang cukup. (Safitri 2015). (Skripsi). Fakultas Kedokteran dan Ilmu Kesehatan. Universitas Islam Negeri Syarif Hidayatullah Jakarta.  
<https://repository.uinjkt.ac.id/dspace/bitstream/123456789/29594/1/WULAN%20SAVITRI-FKIK>
- S. A. Mason, V. G. Welch dan Joseph Neratko, 2018.“Synthetic Polymer contamination in Bottled water,” *Frontiers in Chemistry*
- Sartika, Ratu Ayu Dewi. (2009). Pengaruh Lemak Trans Terhadap Kesehatan Jantung, MAKARA, Jurnal Sains, Vol.13, No.1, p.23-28.
- Salsabila. S., Nazulla. N. S., Zana. P P., Inggita. U. (2022). Temuan Mikroplastik Pada Air Di Instalasi Pengolahan Air 50 Liter Per Detik

- Kamijoro Kabupaten Bantul. *Jurnal Riset Daerah Kabupaten Bantul*, 22(4), 4377-4385.
- Schymanski D, C. Goldbeck, H.-U. Humpf dan P. Fürst. (2018). "Analysis of microplastics in water by micro-Raman spectroscopy: Release of plastic particles from different packaging into mineral water," *Water Research*, vol. 129, pp. 154-162
- Schymanski D, Oßmann BE, Benismail N, Boukerma K, Dallmann G, von der Esch E, Fischer D, Fischer F, Gilliland D, Glas K, Hofmann T, Käppler A, Lacorte S, Marco J, Rakwe ME, Weisser J, Witzig C, Zumbülte N, Ivleva NP. (2021). Analysis of microplastics in drinking water and other clean water samples with micro-Raman and micro-infrared spectroscopy: minimum requirements and best practice guidelines. *Anal Bioanal Chem*. 413(24):5969-5994. doi: 10.1007/s00216-021-03498-y
- Sharifi, H., & Movahedian Attar, H. (2022). Identification, Quantification, and Evaluation of Microplastics Removal Efficiency in a Water Treatment Plant (A Case Study in Iran). *Air, Soil and Water Research*, 15, 117862212211349. <https://doi.org/10.1177/11786221221134945>
- Seghers, J., Stefaniak, EA, La Spina, R. dkk. Persiapan bahan referensi mikroplastik dalam air—evaluasi homogenitas. *Kimia Bioanal Anal* 414 , 385–397 (2022). <https://doi.org/10.1007/s00216-021-03198-7>
- Semmouri, I., Vercauteren, M., van Acker, E., Pequeur, E., Asselman, J., Janssen, C. (2022). Presence of microplastics in drinking water from different freshwater sources in Flanders (Belgium), an urbanized region in Europe. *<i>International Journal of Food Contamination</i>*1). <https://doi.org/10.1186/s40550-022-00091-8</div>>
- Stang. 2014. Cara Praktis Penentuan Uji Statistik Dalam Penelitian Kesehatan Dan Kedokteran. Jakarta: Mitra Wacana Media
- Siswati, and Khuliyah Candraning Diyanah. 2017. Analisis Risiko Pajanan Debu (Total Suspended Particulate) Di Unit Packer PT. X. *Jurnal Kesehatan Lingkungan*. Vol 9 (1). Hal 100-110
- Sumantri, A. 2011. Metodologi Penelitian Kesehatan. Jakarta: Kencana Prenada Media Group.
- Syarif, M. 2021. Identifikasi Mikroplastik Pada Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar. Skripsi. (Online). <http://repository.unhas.ac.id/>

- Taherdoost, H. (2016). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. International Journal of Academic Research in Management (IJARM), 5(2), 18–27.
- Tse, Y. T., Chan, S. M. N., & Sze, E. T. P. (2022). Quantitative Assessment of Full Size Microplastics in Bottled and Tap Water Samples in Hong Kong. International Journal of Environmental Research and Public Health20). [https://doi.org/10.3390/ijerph192013432</div>](https://doi.org/10.3390/ijerph192013432)
- US EPA. United States Environmental Protection Agency. Polyethylene terephthalate <https://cfpub.epa.gov/ncea/iris>
- VOA. (2019). Lingkungan Hidup. Diambil kembali dari Voaindonesia: <https://www.voaindonesia.com/amp/whomikroplastik-pada-air-minum-belummenjadi-masalah-kesehatan-/5052342.html>.
- Yuliana, Novi Diah (2021). Kajian Dampak Mikroplastik di Sungai dan Air Minum terhadap Lingkungan Hidup dan Kesehatan Manusia. Undergraduate thesis, Institut Teknologi Sepuluh Nopember. (Online). <https://repository.its.ac.id/85319/>
- Vimal, K., Mathiyazhagan, K., Agarwal, V., Luthra, S., and Sivakumar, K. (2020). Analysis of barriers that impede the elimination of single-use plastik in developing economy context. J. Clean. Prod. 272:122629. doi: 10.1016/j.jclepro.2020.122629
- Wagner, M & Lambert, S., 2017. Freshwater Microplastics Emerging Environmental Contaminants?.The Handbook of Environmental Chemistry 58. [Online] at: <http://www.springer.com/series/698>
- World Health Organization (WHO), 2019. Microplastiks in Drinking-Water. [Online] [https://www.who.int/water\\_sanitation\\_health](https://www.who.int/water_sanitation_health).
- Wright S.L., Kelly F.J. Plastik and human health: a micro issue? Environ. Sci. Technol. (2017) ;51(12):6634–6647
- Xanthos, D., and Walker, T. R. (2017). International policies to reduce plastik marine pollution from single-use plastiks (plastik bags and microbeads): a review. Mar. Pollut. Bull. 118, 17–26. doi: 10.1016/j.marpolbul.2017.02.048
- Zhang, M., Gu, L., Zheng, P., Chen, Z., Dou, X., Qin, Q., & Cai, X. (2020). Improvement of cell counting method for Neubauer counting chamber. Journal of Clinical Laboratory Analysis, 34(1), 1–6. <https://doi.org/10.1002/jcla.23024>
- Zhang, Q.; Xu, E. G.; Li, J.; Chen, Q.; Ma, L.; Zeng, E. Y.; Shi, H. A. (2020). Review of Microplastics in Table Salt, Drinking Water, and Air: Direct Human Exposure. Environ. Sci. Technol. , 3740, DOI: 10.1021/acs.est.9b04535

## Lampiran 1

### **LEMBAR PENJELASAN UNTUK RESPONDEN**

**Assalamu'alaikum Warahmatullahi Wabarakatuh**

Mohon maaf saya menyita waktu Bapak/Ibu beberapa menit. Saya **Setiawan Kasim-**, Mahasiswa Program Magister Kesehatan Masyarakat Universitas Hasanuddin Konsentrasi Kesehatan Lingkungan bermaksud untuk meminta data/informasi kepada Bapak/Ibu terkait dengan penelitian tesis saya dengan judul **Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (Pet) Dalam Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar**

Tujuan penelitian ini adalah Untuk menganalisis risiko kesehatan lingkungan akibat pajanan mikroplastik *Polyethylene Terephthalate* (Pet) dalam air minum isi ulang di Kelurahan Tamangapa Kota Makassar. Penelitian ini bersifat sukarela. Saya selaku peneliti akan menjaga kerahasiaan identitas dan informasi yang akan diberikan oleh Bapak/Ibu jika bersedia menjadi responden, sehingga saya sangat berharap Bapak/Ibu menjawab pernyataan dengan jujur tanpa keraguan. Jika Bapak/Ibu ingin jawaban yang diberikan tidak diketahui orang lain, maka wawancara singkat bisa dilakukan secara tertutup

Bila selama penelitian ini berlangsung atau saat wawancara singkat responden ingin mengundurkan diri karena sesuatu hal (misalnya: sakit atau ada keperluan lain yang mendesak) maka responden dapat mengungkapkan langsung kepada peneliti. Hal-hal yang tidak jelas dapat menghubungi saya (Setiawan Kasim/082196724348).

#### **Penanggung Jawab Penelitian :**

Nama : Setiawan Kasim, S.Tr Kes

Alamat : Jl. Bontoduri 6 lrg 4a, Kelurahan Bontoduri, Kecamatan Tamalate Kota Makassar

Tlp/HP : 082196724348 (WA)

Email : [setiawankasim80@gmail.com](mailto:setiawankasim80@gmail.com)

## Lampiran 2

### **INFORMED CONSENT (PERSETUJUAN SETELAH PENJELASAN)**

Bapak/Ibu/Saudara Yth,

Perkenalkan nama saya Setiawan Kasim Mahasiswa S2 Program Studi Kesehatan Masyarakat Pascasarjana Universitas Hasanuddin Makassar yang akan melakukan penelitian dengan judul “Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (Pet) Dalam Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar”. Tidak ada risiko fisik yang akan terjadi dalam penelitian ini. Risiko yang mungkin didapat adalah waktu yang tersita dari Bapak/Ibu sekalian untuk menjawab pertanyaan, pengukuran berat badan sekitar 15-30 menit.

Saya Mahasiswa yang sedang melakukan penelitian terkait risiko kesehatan lingkungan khususnya pada aspek komunikasi dan management risiko. Kami melakukan wawancara terhadap bapak/ibu untuk mendapatkan informasi yang dimaksud. Informasi yang disampaikan dari wawancara dengan menggunakan kuesioner ini akan dirahasianakan. Informasi dari Bapak/Ibu sangat berharga untuk mendapatkan informasi yang akurat dan valid.

Oleh karena itu kami berharap Bapak/Ibu dapat meluangkan waktu dan bersedia untuk diwawancara dan akan berlangsung kurang lebih 30 menit. Atas perhatian dan kesediaan Ibu sebagai responden kami ucapan terima kasih.

#### **Penanggung Jawab Penelitian :**

Nama : Setiawan Kasim, S.Tr Kes  
Alamat : Jl. Bontoduri 6 lrg 4a, Kelurahan Bontoduri, Kecamatan Tamalate Kota Makassar  
Tlp/HP : 082196724348 (WA)  
Email : [setiawankasim80@gmail.com](mailto:setiawankasim80@gmail.com)

### Lampiran 3

#### **INFORMED CONSENT (PERSETUJUAN SETELAH PENJELASAN)**

Yang bertanda tangan dibawah ini:

Nama : .....

Tanggal lahir/umur : .....

Alamat : .....

No. Hp : .....

Setelah mendengar/membaca dan mengerti penjelasan yang diberikan mengenai apa yang dilakukan pada penelitian dengan judul "**Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (Pet) Dalam Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar**" maka saya bersedia berpartisipasi dalam penelitian ini. Saya mengerti bahwa pada penelitian ini ada beberapa pertanyaan-pertanyaan yang harus saya jawab, dan sebagai responden maka saya akan menjawab pertanyaan yang diajukan dengan jujur.

Saya menjadi informan bukan karena adanya paksaan dari pihak lain, tetapi karena keinginan saya sendiri dan tidak ada biaya yang akan ditanggungkan kepada saya sesuai dengan penjelasan yang sudah dijelaskan oleh peneliti.

Saya percaya bahwa keamanan dan kerahasiaan data yang diperoleh dari saya sebagai informan akan terjamin dan saya dengan ini menyetujui semua informasi dari saya yang dihasilkan pada penelitian ini dapat dipublikasikan dalam bentuk lisan maupun tulisan dengan tidak mencantumkan nama. Bila terjadi perbedaan pendapat dikemudian hari, kami akan menyelesaikannya secara kekeluargaan.

Makassar, .....2023

( )

#### **Penanggung Jawab Penelitian :**

Nama : Setiawan Kasim, S.Tr Kes

Alamat : Jl. Bontoduri 6 Irg 4a, Kelurahan Bontoduri, Kecamatan Tamalate Kota Makassar

Tlp/HP : 082196724348 (WA)

Email : [setiawankasim80@gmail.com](mailto:setiawankasim80@gmail.com)



## KUESIONER

**“ANALISIS RISIKO KESEHATAN LINGKUNGAN PAJANAN AKIBAT  
MIKROPLASTIK POLYETHYLENE TEREPHTHALATE DALAM AIR MINUM ISI  
ULANG DI KELURAHAN TAMANGAPA KOTA MAKASSAR**

**A. Waktu dan Tempat Pengambilan Data                          No.Kuesioner :**

Hari : \_\_\_\_\_

Tanggal : \_\_\_\_\_

Kelurahan : \_\_\_\_\_

RT/RW : \_\_\_\_\_

**B. Responden**

No. Responden : \_\_\_\_\_

Jenis Kelamin

Laki laki

Perempuan

Umur : \_\_\_\_\_ Tahun

Pendidikan Terakhir:

Tidak Tamat SD

SD

SMP

SMA

Perguruan Tinggi

Pekerjaan :

- |  |  |
|--|--|
| <input type="checkbox"/> Tidak Bekerja     | <input type="checkbox"/> PNS/TNI/POLRI |
| <input type="checkbox"/> IRT               | <input type="checkbox"/> Wiraswasta    |
| <input type="checkbox"/> Lainnya, sebutkan |  |

Sejak kapan anda menetap di lokasi ini?

Tahun :

Bulan :

### C. Identifikasi Air Minum Yang Digunakan

1. Jenis air yang anda gunakan sebagai air minum?

- |   |
|---|
| <input type="checkbox"/> Air minum isi ulang (gallon) |
| <input type="checkbox"/> Air minum dalam kemasan      |
| <input type="checkbox"/> Lainnya                      |

2. Apakah air minum tersebut, anda konsumsi tiap harinya?

- |                             |                                |
|-----------------------------|--------------------------------|
| <input type="checkbox"/> Ya | <input type="checkbox"/> Tidak |
|-----------------------------|--------------------------------|

3. Jika ya, Berapa kali anda mengonsumsi air minum tersebut ?

- |                                  |                                 |
|----------------------------------|---------------------------------|
| <input type="checkbox"/> 1 Kali  | <input type="checkbox"/> 2 Kali |
| <input type="checkbox"/> >3 Kali |                                 |

4. Sudah berapa lama anda mengonsumsi air minum tersebut.....bulan/Tahun

5. Berapa banyak air galon yang keluarga anda gunakan dalam seminggu/sebulan.....galon

6. Pada saat air galon tersebut habis, apakah anda mengisi ulang kembali atau membeli air galon yang baru? Sebutkan.....

7. Jika tidak, apakah anda mengisi ulang air galon tersebut di tempat yang sama atau di tempat yang berbeda? Sebutkan.....
  8. Apakah air galon tersebut digunakan untuk keperluan lainnya? Sebutkan.....
  9. Berapa gelas air yang anda konsumsi dalam sehari      gelas (liter)
  - 10 Berat badan responden      Kg

#### D. Riwayat Kesehatan

1. Apakah selama 1 bulan terakhir anda mengalami keluhan kesehatan

Ya

Tidak

2. Jika ya, keluhan apa yang anda rasakan selama 1 bulan terakhir

- a. Sakit kepala, batuk
  - b. Batuk dan mual
  - c. Hipertensi
  - d. Sakit kepala, demam
  - e. Sakit kepala, maag
  - f. Gangguan tidur
  - g. Gangguan system syaraf

3. Jika ya, apakah keluhan tersebut terjadi dalam rentan waktu berapa lama

## Terus menerus

Sesaat/hilang

4. Apakah selama 1 bulan terakhir anda mengalami keluhan kesehatan lainnya?

Jika ya, Sebutkan:



KEMENTERIAN PENDIDIKAN KEBUDAYAAN,  
RISET DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
FAKULTAS KESEHATAN MASYARAKAT

Jl. Perintis Kemerdekaan Km.10 Makassar 90245, Telp.(0411) 585658,  
e-mail : fkm.unhas@gmail.com, website: https://fkm.unhas.ac.id/

Nomor : 21029/UN4.14.1/PT.01.04/2023

Lamp. : ---

Hal : Permohonan Izin Penelitian

Yth. : **Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu  
Cq. Bidang Penyelenggaraan Pelayanan Perizinan  
Provinsi Sulawesi Selatan**

Tempat

Dengan hormat, kami sampaikan bahwa mahasiswa Program Pascasarjana Fakultas Kesehatan Masyarakat Universitas Hasanuddin yang tersebut di bawah ini :

Nama : Setiawan Kasim

Nomor Pokok : K012212017

Program Studi : S2 Ilmu Kesehatan Masyarakat

Bermaksud melakukan penelitian dalam rangka persiapan penulisan tesis dengan judul **"Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (PET) dalam Air Minum Isi Ulang di Kelurahan Tamangapa Kota Makassar"**

Pembimbing Utama : Prof. Dr. Anwar Daud, SKM.,M.Kes

Pembimbing Utama : Dr. Agus Bintara Birawida, S.Kel.,M.Kes

Waktu Penelitian : April - Juni 2023

Sehubungan dengan hal tersebut kami mohon kebijaksanaan Bapak/Ibu kiranya berkenan memberi izin kepada yang bersangkutan.

Atas perhatian dan kerjasamanya, disampaikan terima kasih.

Makassar, 31 Maret 2023  
an. Dekan.  
Wakil Dekan Bidang Akademik dan Kemahasiswaan



Dr. Wahiduddin, SKM.,M.Kes.  
NIP. 197604072005011004

Tembusan Yth.:

1. Dekan Fakultas Kesehatan Masyarakat Unhas;
2. Arsip.



**PEMERINTAH PROVINSI SULAWESI SELATAN**  
**DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU**

Jl. Bougenville No.5 Telp. (0411) 441077 Fax. (0411) 448936  
Website : <http://simap-new.sulselprov.go.id> Email : [ptsp@sulselprov.go.id](mailto:ptsp@sulselprov.go.id)  
Makassar 90231

Nomor : **14529/S.01/PTSP/2023**  
Lampiran : -  
Perihal : **Izin penelitian**

**Kepada Yth.**  
Walikota Makassar

di-  
**Tempat**

Berdasarkan surat Dekan Fak. kesehatan Masyarakat UNHAS Makassar Nomor : 21029/UN4.14.1/PT.01.04/2023 tanggal 31 Maret 2023 perihal tersebut diatas, mahasiswa/peneliti dibawah ini:

N a m a : **SETIAWAN KASIM**  
Nomor Pokok : K012212017  
Program Studi : Kesehatan Masyarakat  
Pekerjaan/Lembaga : Mahasiswa (S2)  
Alamat : Jl. P. Kemerdekaan Km., 10 Makassar



Bermaksud untuk melakukan penelitian di daerah/kantor saudara dalam rangka menyusun Tesis, dengan judul :

**" ANALISIS RISIKO KESEHATAN LINGKUNGAN AKIBAT PAJANAN MIKROPLASTIK POLYETYLENE TEREPHTALATE (PET) DALAM AIR MINUM ISI ULANG DI KELURAHAN TAMANGAPA KOTA MAKASSAR "**

Yang akan dilaksanakan dari : Tgl. **01 Mei s/d 31 Juli 2023**

Sehubungan dengan hal tersebut diatas, pada prinsipnya kami **menyetujui** kegiatan dimaksud dengan ketentuan yang tertera di belakang surat izin penelitian.

Demikian Surat Keterangan ini diberikan agar dipergunakan sebagaimana mestinya.

Diterbitkan di Makassar  
Pada Tanggal 31 Maret 2023

**A.n. GUBERNUR SULAWESI SELATAN  
KEPALA DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU  
SATU PINTU PROVINSI SULAWESI SELATAN**



**Ir. H. SULKAF S LATIEF, M.M.**  
Pangkat : PEMBINA UTAMA MADYA  
Nip : 19630424 198903 1 010

Tembusan Yth

1. Dekan Fak. kesehatan Masyarakat UNHAS Makassar di Makassar;
2. Pertinggal.

**KETENTUAN PEMEGANG IZIN PENELITIAN :**

1. Sebelum dan sesudah melaksanakan kegiatan, kepada yang bersangkutan melapor kepada Bupati/Walikota C q. Kepala Bappelitbangda Prov. Sulsel, apabila kegiatan dilaksanakan di Kab/Kota
2. Penelitian tidak menyimpang dari izin yang diberikan
3. Mentaati semua peraturan perundang-undangan yang berlaku dan mengindahkan adat istiadat setempat
4. Menyerahkan 1 (satu) eksamplar hardcopy dan softcopy kepada Gubernur Sulsel. Cq. Kepala Badan Perencanaan Pembangunan Penelitian dan Pengembangan Daerah Prov. Sulsel
5. Surat izin akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat izin ini tidak mentaati ketentuan tersebut diatas.

**REGISTRASI ONLINE IZIN PENELITIAN DI WEBSITE :**

<https://izin-penelitian.sulselprov.go.id>

NOMOR REGISTRASI 20230331587020



Catatan :

- UU ITE No. 11 Tahun 2008 Pasal 5 ayat 1 'Informasi Elektronik dan/atau hasil cetaknya merupakan alat bukti yang sah.'
- Dokumen ini telah ditandatangani secara elektronik menggunakan **sertifikat elektronik** yang diterbitkan **BSrE**
- Surat ini dapat dibuktikan keasliannya dengan melakukan *scan* pada QR Code





# PEMERINTAH KOTA MAKASSAR

## DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU

Jalan Ahmad Yani Nomor 2, Bulo Gading, Ujung Pandang, Kota Makassar, Sulawesi Selatan 90171  
Laman [dpmptsp.makassarkota.go.id](http://dpmptsp.makassarkota.go.id) Pos-el [dpmptsp@makassarkota.go.id](mailto:dpmptsp@makassarkota.go.id)

### SURAT KETERANGAN PENELITIAN

Nomor : 070/210/SKP/DPMPTSP/IV/2023

- Dasar :
1. Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 3 Tahun 2018 tentang Penerbitan Keterangan Penelitian;
  2. Peraturan Daerah Kota Makassar Nomor 8 Tahun 2016 tentang Pembentukan Organisasi Perangkat Daerah;
  3. Peraturan Walikota Makassar Nomor 88 Tahun 2021 tentang Kedudukan, Susunan Organisasi, Tugas dan Fungsi Serta Tata Kerja Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu;
  4. Surat Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Provinsi Sulawesi Selatan Nomor **14529/S.01/PTSP/2023** Tanggal **31 Maret 2023**;
  5. Rekomendasi Teknis Badan Kesatuan Bangsa dan Politik Kota Makassar Nomor **070/215-II/BKBP/IV/2023** Tanggal **27 April 2023**.

#### DENGAN INI MENERANGKAN BAWHA :

Nama	: SETIAWAN KASIM
NIM / Jurusan	: K012212017 / Kesehatan Masyarakat
Pekerjaan	: Mahasiswa (S2) / UNHAS
Alamat	: Jl. P. Kemerdekaan Km 10, Makassar
Lokasi Penelitian	: Kecamatan Manggala Kota Makassar
Waktu Penelitian	: 01 Mei s/d 31 Juli 2023
Tujuan	: Tesis
Judul Penelitian	: "ANALISIS RISIKO KESEHATAN LINGKUNGAN AKIBAT PAJANAN MIKROPLASTIK POLYETYLENE TEREPHTALATE (PET) DALAM AIR MINUM ISI ULANG DI KELURAHAN TAMANGAPA KOTA MAKASSAR"

Dalam melakukan kegiatan agar yang bersangkutan memenuhi ketentuan sebagai berikut :

1. Surat Keterangan Penelitian ini diterbitkan untuk kepentingan penelitian yang bersangkutan selama waktu yang sudah ditentukan dalam surat keterangan ini.
2. Tidak dibenarkan melakukan penelitian yang tidak sesuai / tidak ada kaitannya dengan judul dan tujuan kegiatan Penelitian.
3. Melaporkan hasil penelitian kepada Kepala Badan Kesatuan Bangsa dan Politik Kota Makassar melalui email [bidangpoldagrikesbangpolmks@gmail.com](mailto:bidangpoldagrikesbangpolmks@gmail.com).
4. Surat Keterangan Penelitian ini dicabut kembali apabila pemegangnya tidak menaati ketentuan tersebut diatas.

Makassar, 28 April 2023



Ditandatangi secara elektronik oleh  
**KEPALA DINAS PENANAMAN MODAL DAN  
PELAYANAN TERPADU SATU PINTU  
KOTA MAKASSAR**

**A. ZULKIFLY, S.STP., M.Si.**





KEMENTERIAN PENDIDIKAN, KEBUDAYAAN  
RISET, DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
**FAKULTAS KESEHATAN MASYARAKAT**

Jln. Perintis Kemerdekaan Km. 10 Makassar 90245, Telp. (0411) 585658,  
E-mail : [fkm.unhas@gmail.com](mailto:fkm.unhas@gmail.com), website: <https://fkm.unhas.ac.id/>

**REKOMENDASI PERSETUJUAN ETIK**

Nomor : : 3135/UN4.14.1/TP.01.02/2023

Tanggal : 30 Maret 2023

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No.Protokol	24323072071	No. Sponsor Protokol	
Peneliti Utama	<b>Setiawan Kasim</b>	Sponsor	<b>Pribadi</b>
Judul Peneliti	<b>Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (Pet) dalam Air Minum Isi Ulang di Kelurahan Tamangapa Kota Makassar</b>		
No.Versi Protokol	1	Tanggal Versi	24 Maret 2023
No.Versi PSP	1	Tanggal Versi	24 Maret 2023
Tempat Penelitian	<b>Kelurahan Tamangapa, Kota Makassar</b>		
Judul Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku <b>30 Maret 2023</b> <b>Sampai 30</b> <b>Maret 2024</b>	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr. Veni Hadju,M.Sc,Ph.D	Tanda tangan 	Tanggal  <b>30 Maret 2023</b>
Sekretaris Komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan 	Tanggal  <b>30 Maret 2023</b>

Kewajiban Peneliti Utama :

1. Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
2. Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
3. Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
4. Menyerahkan laporan akhir setelah Penelitian berakhir
5. Melaporkan penyimpangan dari protocol yang disetujui (protocol deviation/violation)
6. Mematuhi semua peraturan yang ditentukan



**PEMERINTAH KOTA MAKASSAR**  
**KECAMATAN MANGGALA**  
Jl. Bitowa Raya Nomor 3, Makassar 90234  
☎ (0411) 493-542 ✉ [kec.manggala@gmail.com](mailto:kec.manggala@gmail.com)



Nomor : 070/031/KMGL/V/2023  
Lampiran : -  
Perihal : IZIN PENELITIAN

Makassar, 11 Mei 2023  
Kepada  
Yth. LURAH TAMANGAPA  
Di –  
Makassar

Menindaklanjuti surat Dinas Penanaman Modal Dan Pelayanan Terpadu Satu Pintu Nomor : 070/210/SKP/DPMPTSP/IV/2023 Tanggal 28 April 2023, perihal izin penelitian, maka bersama ini disampaikan kepada Bapak / Ibu bahwa :

N a m a : **SETIAWAN KASIM**  
Pekerjaan : Mahasiswa (S2) / UNHAS  
Alamat : Jl. PERINTIS KEMERDEKAAN KM 10, Makassar  
Judul : **“ANALISIS RISIKO KESEHATAN LINGKUNGAN AKIBAT PAJANAN MIKROPLASTIK POLYETYLENE TEREPHTHALATE (PET) DALAM AIR MINUM ISI ULANG DI KELURAHAN TAMANGAPA KOTA MAKASSAR”**

Bermaksud mengadakan Penelitian pada instansi / wilayah Bapak / Ibu, dalam rangka penyusunan **TESIS** yang akan dilaksanakan mulai tanggal 1 Mei s/d 31 Juni 2023

Demikian disampaikan kepada Saudara untuk dimaklumi dan selanjutnya yang bersangkutan melaporkan hasilnya kepada Camat Manggala Kota Makassar.

A.n **CAMAT MANGGALA**  
**Kasi Pemberdayaan Masyarakat Dan**  
**Kesejahteraan Sosial**

**HUSNA ALWI, S.T**  
Pangkat :Penata Tk.I  
NIP. 19810708 201101 2 002

Tembusan :  
1. Pertinggal.



PEMERINTAH KOTA MAKASSAR  
KECAMATAN MANGGALA

# KELURAHAN TAMANGAPA

Jl. Tamangapa Raya No.262 A Tlp.(0411) 495556 Makassar



Makassar, 10 Mei 2023

Nomor : 005 / 138 / TMP / V / 2023

Lampiran :-

Perihal : Izin Penelitian

K e p a d a ,

Yth. 1. **Pemilik Depot Air Minum Isi Ulang**

2. **Masyarakat**

Di-

Kelurahan Tamangapa

Yang bertanda tangan dibawah ini, Lurah Tamangapa Kecamatan Manggala Kota Makassar menerangkan bahwa :

<b>N a m a</b>	: SETIAWAN KASIM
NIM/Jurusan	: K012212017/ Kesehatan Lingkungan
Pekerjaan	: Mahasiswa (S2)/ UNHAS
Alamat	: Jln. Perintis Kemerdekaan Km 10, Makassar
Kegiatan/ Judul	: <b>"ANALISIS RISIKO KESEHATAN LINGKUNGAN AKIBAT PAJANAN MIKROPLASTIK POLYETYLENE TEREPHTHALATE (PET) DALAM AIR MINUM ISI ULANG DI KELURAHAN TAMANGAPA KECAMATAN MANGGALA KOTA MAKASSAR "</b>

Bermaksud mengadakan Penelitian/survei/pengambilan data dalam wilayah Kelurahan Tamangapa Kecamatan Manggala Kota Makassar di **Pemilik Depot Air Minum Isi Ulang Dan Di Masyarakat** 10 sejak Mei s/d Juni 2023.

Demikian surat pengantar ini dibuat untuk di pergunakan sebagai mana mestinya.

Makassar, 10 Mei 2023





KEMENTERIAN PENDIDIKAN KEBUDAYAAN,  
RISET DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
FAKULTAS KESEHATAN MASYARAKAT

Jl. Perintis Kemerdekaan Km.10 Makassar 90245, Telp.(0411) 585658,  
e-mail : fkm.unhas@gmail.com, website: https://fkm.unhas.ac.id/

Nomor : 21503/UN4.14.1/PT.01.04/2023

Lamp. : ---

Hal : Permohonan Izin Penelitian

Yth. : Dekan Fakultas Perikanan dan Ilmu Kelautan  
Universitas Hasanuddin  
Tempat

Dengan hormat, kami sampaikan bahwa mahasiswa Program Pascasarjana Fakultas Kesehatan Masyarakat Universitas Hasanuddin yang tersebut di bawah ini :

Nama : Setiawan Kasim

Nomor Pokok : K012212017

Program Studi : S2 Ilmu Kesehatan Masyarakat

Bermaksud melakukan penelitian di Laboratorium Ekotoksikologi Fakultas Perikanan Dan Ilmu Kelautan Universitas Hasanuddin dalam rangka persiapan penulisan tesis dengan judul "**Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (PET) Dalam Air Minum Isi Ulang Di Kelurahan Tamangapa Kota Makassar**"

Pembimbing Utama : Prof. Dr. Anwar Daud, SKM.,M.Kes

Pembimbing Utama : Dr. Agus Bintara Birawida, S.Kel.,M.Kes

Waktu Penelitian : Mei - Juli 2023

Sehubungan dengan hal tersebut kami mohon kebijaksanaan Bapak/Ibu kiranya berkenan memberi izin kepada yang bersangkutan.

Atas perhatian dan kerjasamanya, disampaikan terima kasih.

Makassar, 6 Mei 2023

an. Dekan.

Wakil Dekan Bidang Akademik dan Kemahasiswaan



Dr. Wahiduddin, SKM.,M.Kes.

NIP 197604072005011004

Tembusan Yth.:

1. Dekan Fakultas Kesehatan Masyarakat Unhas;
2. Arsip.



**LABORATORIUM EKOTOKSIKOLOGI LAUT  
DEPARTEMEN ILMU KELAUTAN  
FAKULTAS ILMU KELAUTAN DAN PERIKANAN  
UNIVERSITAS HASANUDDIN**

Jl. Perintis Kemerdekaan, KM 10 Tamalanrea, Makassar, Indonesia 90245  
Telp. (0411) 586025, Hp. 0815-250-4202

**Hasil Identifikasi dan Analisis Mikroplastik (MP)**

Nama pemilik sampel : Setiawan Kasim  
Jenis sampel : Air Minum Isi Ulang  
Judul Penelitian : Analisis Risiko Kesehatan Lingkungan Akibat Pajanan Mikroplastik Polyethylene Terephthalate (PET) Dalam Air Minum Isi Ulang di Kelurahan Tamangapa Kota Makassar.

**I. Hasil Identifikasi Sampel Air**

Lokasi : Makassar  
Jumlah sampel air : 20 botol  
Jumlah sampel terdeteksi MP : 20 botol  
Jumlah MP yang ditemukan pada air : 104 item  
Persen kontaminasi : 100%  
Rata-rata Kelimpahan MP (item/ml) : 0,0052 item/ml  
Karakteristik MP yang ditemukan pada air :

Kode sampel	Karakteristik Mikroplastik (MP)			Jumlah Item (MP)	Perbesaran
	Bentuk	Warna	Ukuran (mm)		
1	Line	Biru	0.733	30	4,5
	Line	Biru	0.376		
	Line	Biru	0.800		
	Line	Biru	0.148		
	Line	Biru	0.863		
	Line	Biru	0.889		
	Line	Biru	0.115		
	Line	Biru	0.199		
	Line	Biru	0.485		
	Line	Biru	0.503		
	Line	Biru	0.184		
	Line	Biru	0.050		
	Line	Biru	0.303		
	Line	Biru	0.490		
	Line	Biru	0.199		
	Line	Biru	0.566		
	Line	Biru	0.592		
	Line	Biru	0.838		
	Line	Biru	0.630		
	Line	Biru	0.154		
	Line	Biru	0.317		
	Line	Biru	0.593		
2	Line	Transparan	0.478	2	4,5
	Line	Transparan	0.257		
3	Line	Transparan	1.357	3	4,5
	Line	Transparan	0.202		
	Line	Transparan	0.248		
	Line	Merah	0.429		
	Line	Merah	0.688		
	Line	Merah	0.931		
	Line	Biru	0.968		
	Line	Transparan	0.445		
	Line	Transparan	0.633		
	Line	Biru	0.128		
	Line	Biru	0.500		



**LABORATORIUM EKOTOKSIKOLOGI LAUT**  
**DEPARTEMEN ILMU KELAUTAN**  
**FAKULTAS ILMU KELAUTAN DAN PERIKANAN**  
**UNIVERSITAS HASANUDDIN**

Jl. Perintis Kemerdekaan, KM 10 Tamalanrea, Makassar, Indonesia 90245  
Telp. (0411) 586025, Hp. 0815-250-4202

Kode sampel	Karakteristik Mikroplastik (MP)			Jumlah Item (MP)	Perbesaran
	Bentuk	Warna	Ukuran (mm)		
4	Line	Transparan	0.305	1	4,5
5	Line	Biru	0.177	10	4,5
	Line	Biru	0.124		
	Line	Biru	0.179		
	Line	Biru	0.428		
	Line	Transparan	0.572		
	Line	Transparan	0.415		
	Line	Transparan	0.778		
	Line	Transparan	0.301		
	Line	Transparan	0.696		
	Line	Transparan	1.470		
6	Line	Biru	0.410	3	4,5
	Line	Transparan	0.431		
	Line	Transparan	0.307		
7	Line	Transparan	1.173	11	4,5
	Line	Transparan	0.730		
	Line	Transparan	0.354		
	Line	Merah	0.336		
	Line	Merah	0.167		
	Line	Merah	0.542		
	Line	Biru	0.295		
	Line	Biru	0.211		
	Line	Biru	0.442		
	Line	Biru	0.522		
	Line	Biru	1.225		
8	Line	Merah	0.933	6	4,5
	Line	Transparan	0.263		
	Line	Transparan	0.363		
	Line	Biru	0.458		
	Line	Biru	0.165		
	Line	Biru	0.466		
9	Line	Merah	0.133	9	4,5
	Line	Biru	0.198		
	Line	Biru	0.545		
	Line	Biru	0.165		
	Line	Biru	0.109		
	Line	Biru	1.128		
	Line	Biru	0.474		
	Line	Biru	0.157		
	Line	Biru	0.604		
10	Line	Biru	0.398	3	4,5
	Line	Biru	0.235		
	Line	Transparan	0.736		
11	Line	Transparan	0.285	4	4,5
	Line	Biru	0.481		
	Line	Biru	0.434		
	Line	Biru	0.620		
12	Line	Biru	0.175	4	4,5
	Line	Transparan	0.290		
	Line	Transparan	2.408		



**LABORATORIUM EKOTOKSIKOLOGI LAUT**  
**DEPARTEMEN ILMU KELAUTAN**  
**FAKULTAS ILMU KELAUTAN DAN PERIKANAN**  
**UNIVERSITAS HASANUDDIN**

Jl. Perintis Kemerdekaan, KM 10 Tamalanrea, Makassar, Indonesia 90245  
Telp. (0411) 586025, Hp. 0815-250-4202

Kode sampel	Karakteristik Mikroplastik (MP)			Jumlah Item (MP)	Perbesaran
	Bentuk	Warna	Ukuran (mm)		
13	Line	Transparan	2.300	4	4,5
	Line	Merah	0.199		
	Line	Transparan	0.437		
	Line	Transparan	0.564		
14	Line	Transparan	0.338	1	4,5
15	Line	Transparan	0.250	4	4,5
	Line	Transparan	0.597		
	Line	Biru	0.095		
	Line	Biru	0.093		
16	Line	Biru	0.534	3	4,5
	Line	Transparan	2.003		
	Line	Biru	0.209		
17	Line	Biru	0.525	2	4,5
	Line	Transparan	0.202		
18	Line	Merah	0.756	2	4,5
	Line	Transparan	0.179		
19	Line	Biru	0.840	1	4,5
20	Line	Biru	0.655	1	4,5
			<b>TOTAL</b>	<b>104</b>	

## II. Kelimpahan Mikroplastik

Kode Sampel	Volume Air Tersaring (ml)	Jumlah MP	Kelimpahan MP (item/ml)
1	1000	30	0,030
2	1000	2	0,002
3	1000	3	0,003
4	1000	1	0,001
5	1000	10	0,010
6	1000	3	0,003
7	1000	11	0,011
8	1000	6	0,006
9	1000	9	0,009
10	1000	3	0,003
11	1000	4	0,004
12	1000	4	0,004
13	1000	4	0,004
14	1000	1	0,001
15	1000	4	0,004
16	1000	3	0,003
17	1000	2	0,002
18	1000	2	0,002
19	1000	1	0,001
20	1000	1	0,001
<b>RATA-RATA</b>			<b>0,0052</b>



**LABORATORIUM EKOTOXIKOLOGI LAUT  
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Telp. (0411) 586025, Hp. 0815-250-4202

**III. Contoh Gambar Mikroplastik**

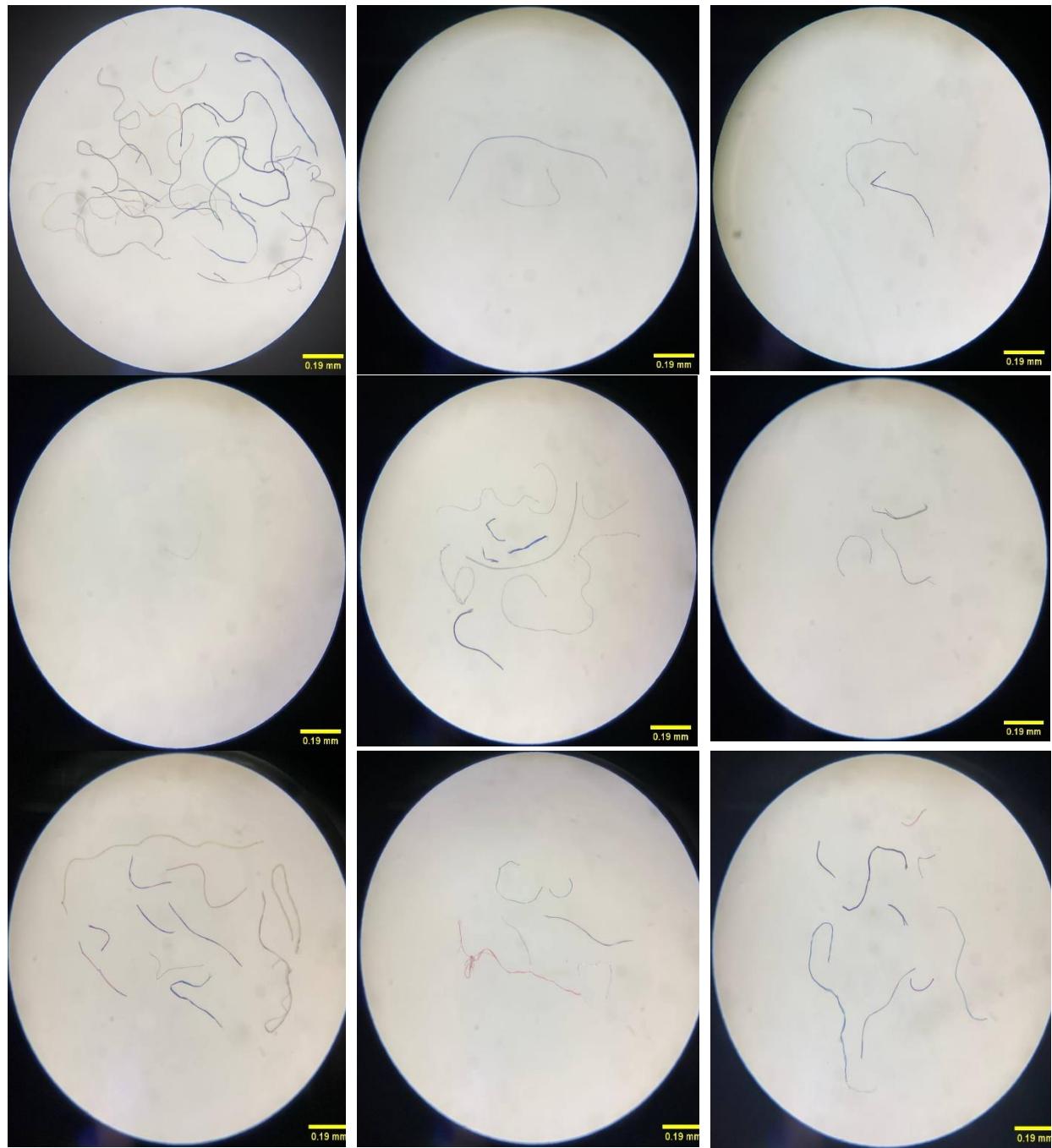


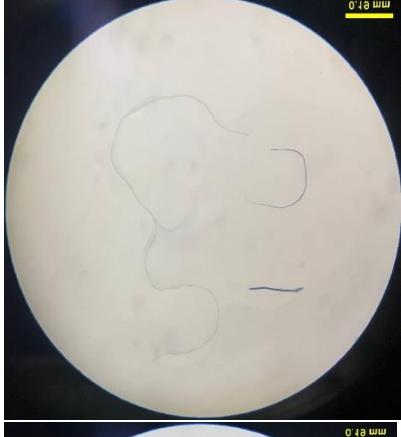
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Kepala Laboratorium,



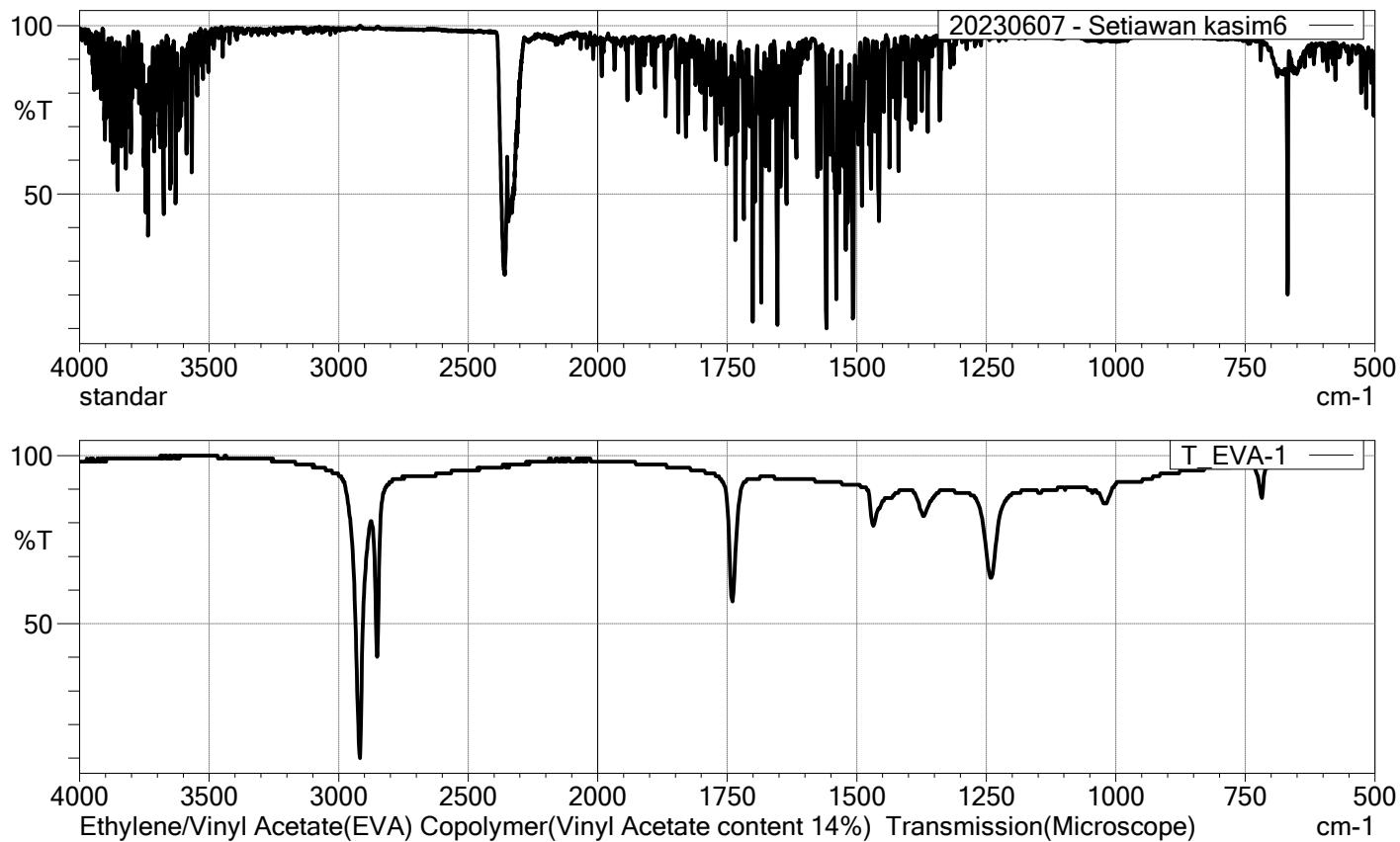
**Dr. Ir. Shinta Werorilangi, M.Sc.  
NIP. 19670826 199103 2 001**

Lampiran 8









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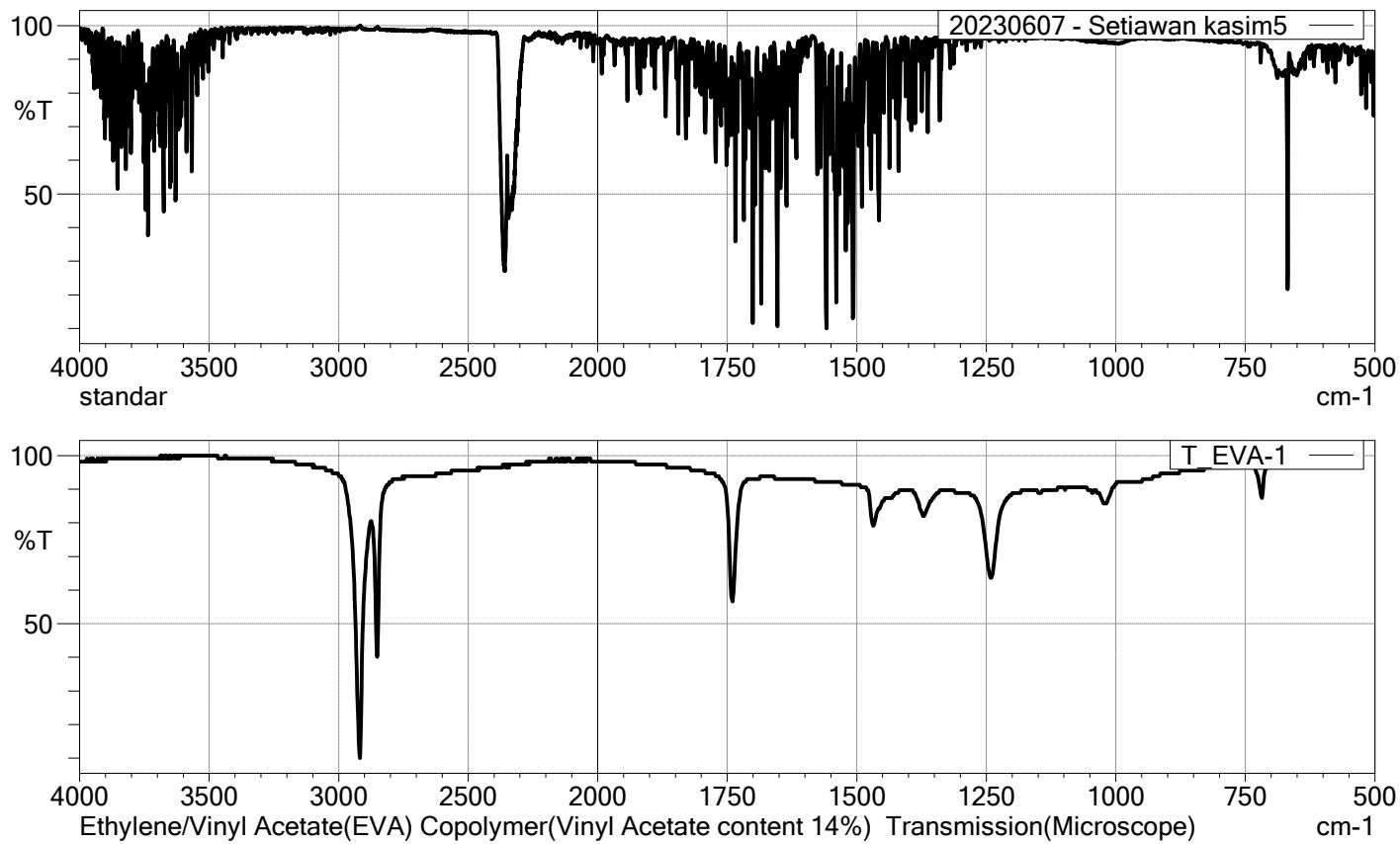
	Score	Library	Name	Comment
1	542	51 - IRs ATR Reagent2	51	Phosphoric Acid H <sub>3</sub> PO <sub>4</sub> ATR/diamond molecular weight:98.00 liquid
2	542	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C <sub>5</sub> H <sub>9</sub> NO ATR/diamond molecular weight:99.13 liquid
3	538	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid
4	534	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
5	531	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)

6	530	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSampIR2(diamo nd)
7	530	149 - IRs ATR Reagent2	149	Ammonium Metavanadate NH4VO3 ATR/diamond molecular weight:116.98 powder
8	528	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH3)2 ATR/diamond molecular weight:73.10 liquid
9	528	100 - IRs Pharmaceuticals	AMIKACIN SULPHATE	AMIKACIN SULPHATE Formula; C22H43N5O13.2H2SO4 MW; 781.76 (CONTROL NO. T 197089) ASEAN REFERENCE STANDARD (4-9-2002) LOSS ON DRYING - (2.62%). EACH MG IS EQUIVALENT TO 680 IU OF AMIKACIN ON THE
10	527	209 - IRs Agrichemicals	Dibutyl Phthalate-d4	Dibutyl Phthalate-d4 Standard ATR method(KRS-5 prism)
11	527	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
12	526	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
13	525	160 - IRs ATR Reagent2	160	2,4-Dinitrophenylhydrazine C6H3(NO2)2NHNH2 ATR/diamond molecular weight:198.14 powder
14	524	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSampIR-II
15	524	156 - IRs Pharmaceuticals	Actinomycin D	Actinomycin D formula : C62H86N12O16 ATR/diamond molecular weight : 1255.42
16	524	19 - T-Organic2	DiethylPhthalate	DiethylPhthalate Transmission
17	524	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
18	523	68 - IRs Agrichemicals	CVMP	CVMP Standard ATR method(KRS-5 prism)
19	522	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
20	521	212 - IRs Agrichemicals	Diethyl Phthalate-d4	Diethyl Phthalate-d4 Standard ATR method(KRS-5 prism)

21	521	32 - T_FoodAdditives2	T_Cinnamaldehyde-4	Cinnamaldehyde(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
22	521	93 - T-Polymer2	T_Cellulose_Acetate	Cellulose Acetate(Acetyl content 39.8%) Transmission(Microscope)
23	520	41 - A_FoodAdditives2	A_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose(Product name;VIVAPUR102CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
24	519	4 - IRs Polymer2	ARAMID	ARAMID fiber ATR/diamond ATRcorrected
25	519	96 - T-Polymer2	T_Cellulose_Triacetate	Cellulose Triacetate(43.6% acetyl content) Transmission(Microscope)
26	518	186 - IRs Agrochemicals	PAP	PAP Standard ATR method(KRS-5 prism)
27	518	126 - IRs ATR Reagent2	126	Sodium Acetate CH <sub>3</sub> COONa-3H <sub>2</sub> O ATR/diamond molecular weight:136.08 powder
28	518	3 - IRs Polymer2	ARABIC	Arabic gum Film
29	516	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
30	515	183 - IRs ATR Reagent2	183	Thymol Blue C <sub>27</sub> H <sub>30</sub> O <sub>5</sub> S ATR/diamond molecular weight:466.60 powder
31	515	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C <sub>16</sub> H <sub>19</sub> N <sub>3</sub> O <sub>4</sub> S·3H <sub>2</sub> O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
32	514	23 - IRs Agrochemicals	Thiram	Thiram ATR method(KRS-5 prism)

33	513	96 - IRs Agrichemicals	Quizalofop-ethyl	Quizalofop-ethyl Standard ATR method(KRS-5 prism)
34	513	4 - IRs Reagent2	2PRO-OH	2-Propanol CH <sub>3</sub> CH(OH)CH <sub>3</sub> ATR/diamond ATRcorrected
35	513	41 - T_FoodAdditives2	T_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
36	512	89 - IRs ATR Reagent2	89	Acetic Acid CH <sub>3</sub> COOH ATR/diamond molecular weight:60.05 liquid
37	512	109 - IRs ATR Reagent2	109	Butylated Hydroxytoluene C <sub>15</sub> H <sub>24</sub> O ATR/diamond molecular weight:220.36 powder
38	512	24 - T_FoodAdditives2	T_Xylitol-4	Xylitol(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
39	511	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
40	510	74 - IRs Agrichemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
41	509	37 - ATR-Organic2	D_StearateZn	Zn Stearate DuraSamplIR
42	506	26 - ATR-Organic2	D_n-ButylPhthalate	n-ButylPhthalate DuraSamplIR
43	506	66 - IRs Polymer2	SILICON	Silicone rubber ATR/diamond ATRcorrected
44	505	81 - IRs Agrichemicals	DEP	DEP Standard ATR method(KRS-5 prism)
45	505	138 - IRs Agrichemicals	Ethion	Ethion Standard ATR method(KRS-5 prism)
46	504	11 - IRs ATR Reagent2	11	Atropine C <sub>17</sub> H <sub>23</sub> NO <sub>3</sub> ATR/diamond molecular weight: powder
47	503	161 - ATR-Polymer2	D_PVAL-1	Poly(Vinyl Alcohol)(PVAL)(100% hydrolyzed) DuraSamplIR-II
48	496	34 - IRs Pharmaceuticals	LANATOSIDE C	LANATOSIDE C Formula; C <sub>49</sub> H <sub>76</sub> O <sub>20</sub> MW; 985.13 (INTERNATIONAL CHEMICAL REFERENCE SUBSTANCE) CONTROL NO.281022
49	494	148 - IRs Agrichemicals	Dimethipin	Dimethipin Standard ATR method(KRS-5 prism)

50	494	78 - IRs Reagent2	PINENE	Pinene [C10C16] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
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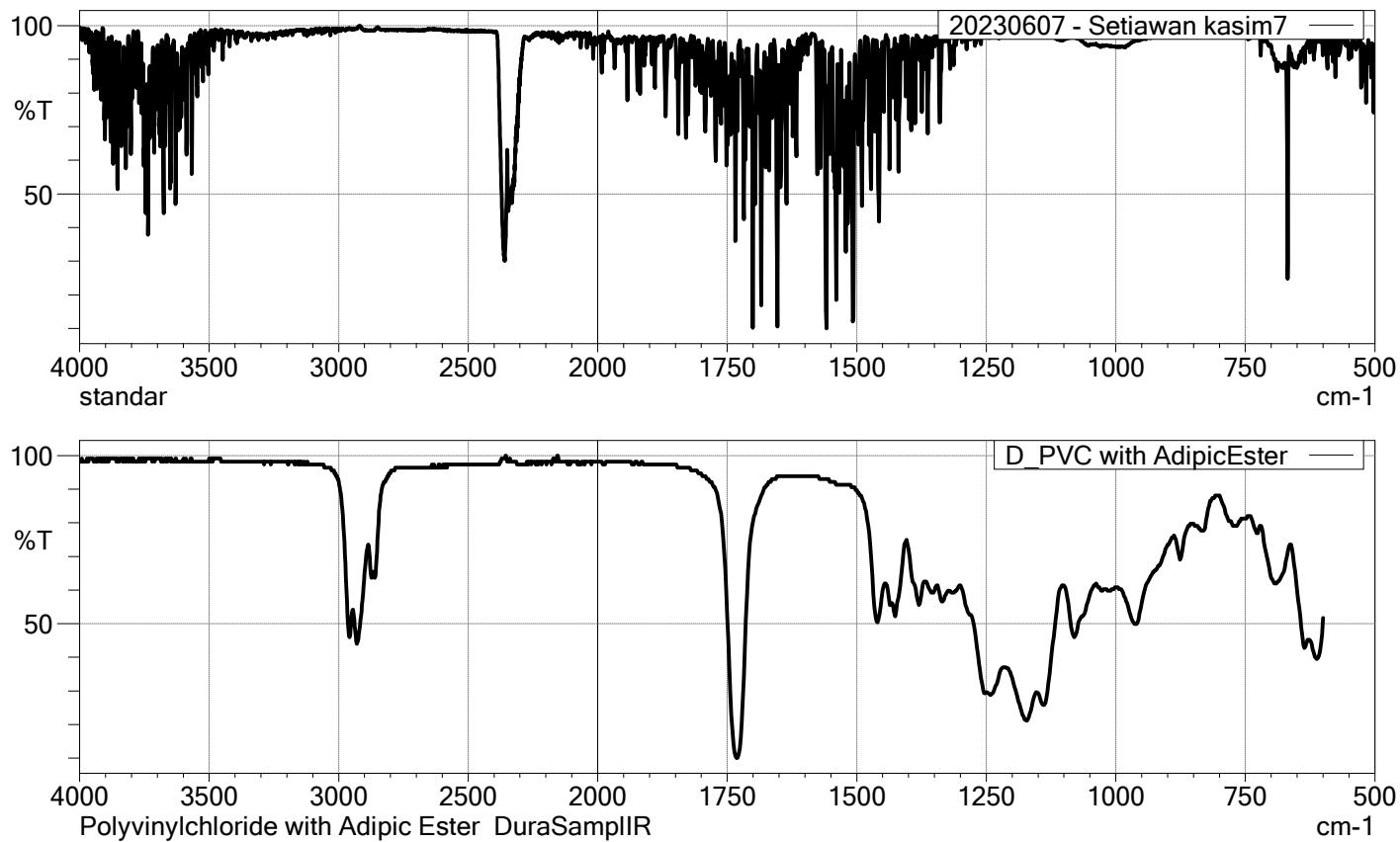
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	Score	Library	Name	Comment
1	541	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid
2	541	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
3	540	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
4	539	51 - IRs ATR Reagent2	51	Phosphoric Acid H <sub>3</sub> PO <sub>4</sub> ATR/diamond molecular weight:98.00 liquid
5	538	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
6	535	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C <sub>5</sub> H <sub>9</sub> NO ATR/diamond molecular weight:99.13 liquid

7	532	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
8	532	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
9	529	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH3(CH2)16CH2OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
10	528	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
11	528	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH3)2 ATR/diamond molecular weight:73.10 liquid
12	527	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)
13	526	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
14	525	68 - IRs Agrichemicals	CVMP	CVMP Standard ATR method(KRS-5 prism)
15	524	74 - IRs Agrichemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
16	524	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR
17	523	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
18	523	26 - IRs Polymer2	NYLON12	Nylon 12 Film
19	522	31 - IRs ATR Reagent2	31	p-Aminophenol NH2C6H4OH ATR/diamond molecular weight:109.13 powder
20	522	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
21	521	186 - IRs Agrichemicals	PAP	PAP Standard ATR method(KRS-5 prism)

22	521	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
23	521	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
24	520	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamo hd)
25	520	43 - T-Organic2	T_butter	butter Transmission(Microscope)
26	520	55 - IRs Polymer2	PS2	Polystyrene Film
27	518	120 - IRs Agrichemicals	Cumyluron	Cumyluron Standard ATR method(KRS-5 prism)
28	518	53 - IRs Agrichemicals	EDDP	EDDP Standard ATR method(KRS-5 prism)
29	518	26 - IRs ATR Reagent2	26	Cholic Acid C24H40O5 ATR/diamond molecular weight:408.58 powder
30	518	34 - IRs Polymer2	PB	Polybutene ATR/diamond ATRcorrected
31	518	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
32	517	37 - ATR-Organic2	D_StearateZn	Zn Stearate DuraSamplIR
33	517	15 - T-Organic2	n-HeptanoicAcid	n-HeptanoicAcid Transmission
34	517	53 - IRs Polymer2	PS	Polystyrene ATR/diamond ATRcorrected
35	516	81 - IRs Agrichemicals	DEP	DEP Standard ATR method(KRS-5 prism)
36	514	181 - IRs Pharmaceuticals	Josamycin	Josamycin formula : C42H69NO15 ATR/diamond molecular weight : 827.99
37	514	96 - T-Polymer2	T_Cellulose_Triacetate	Cellulose Triacetate(43.6% acetyl content) Transmission(Microscope)
38	514	93 - T-Polymer2	T_Cellulose_Acetate	Cellulose Acetate(Acetyl content 39.8%) Transmission(Microscope)

39	513	47 - IRs Polymer2	PINENE	Pinene [C10H16] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
40	513	38 - IRs Polymer2	PEI	Poly etherimide Film
41	513	78 - IRs Reagent2	PINENE	Pinene [C10C16] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
42	511	148 - IRs Agrichemicals	Dimethipin	Dimethipin Standard ATR method(KRS-5 prism)
43	511	67 - T-Polymer2	DLTDP	Polymer Additive(DLTDP) Transmission(Microscope)
44	510	159 - ATR-Polymer2	D_PTFE2	Poly(Tetrafluoroethylene) DuraSamplIR-II
45	510	160 - IRs ATR Reagent2	160	2,4-Dinitrophenylhydrazine C6H3(NO2)2NHNH2 ATR/diamond molecular weight:198.14 powder
46	510	134 - IRs ATR Reagent2	134	Bis(1-Phenyl-3-methyl-5-pyrazol one) C20H18N4O2 ATR/diamond molecular weight:346.39 powder
47	509	129 - IRs Agrichemicals	Furametpyr	Furametpyr Standard ATR method(KRS-5 prism)
48	509	23 - IRs Agrichemicals	Thiram	Thiram ATR method(KRS-5 prism)
49	509	138 - IRs Agrichemicals	Ethion	Ethion Standard ATR method(KRS-5 prism)
50	509	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between



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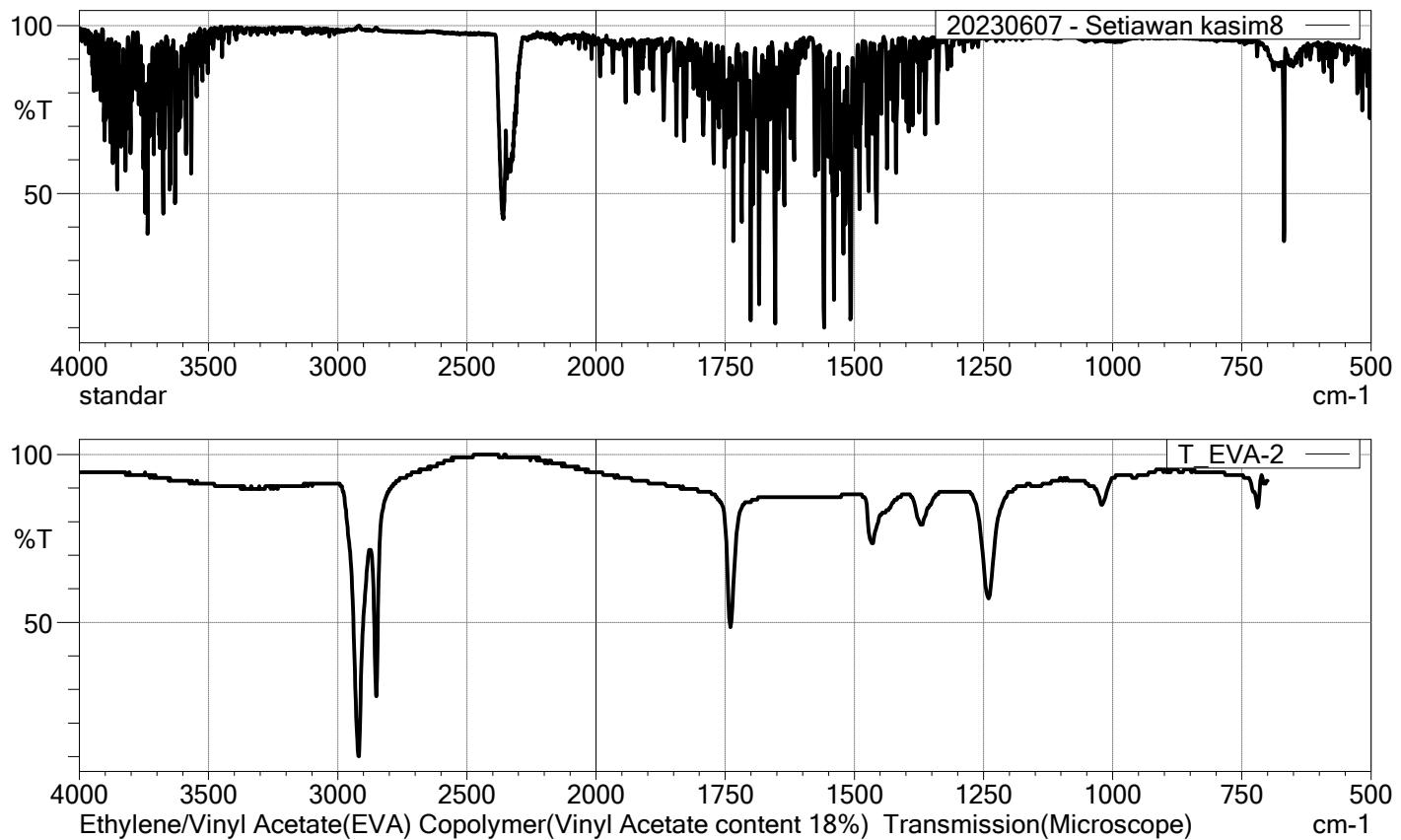
	Score	Library	Name	Comment
1	561	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
2	558	41 - A_FoodAdditives2	A_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose(Product name;VIVAPUR102CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
3	550	44 - A_FoodAdditives2	A_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name;CELISH FD-200LCSales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
4	549	50 - A_FoodAdditives2	A_Powdered Cellulose-4	Powdered Cellulosec(Product name;VITACEL L-600CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
5	547	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid

6	546	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
7	545	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
8	543	149 - IRs ATR Reagent2	149	Ammonium Metavanadate NH4VO3 ATR/diamond molecular weight:116.98 powder
9	542	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na2S2O3 ATR/diamond molecular weight:158.11 liquid
10	541	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
11	538	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
12	538	125 - IRs ATR Reagent2	125	Tartaric Acid C2H2(OH)2(COOH)2 ATR/diamond molecular weight:150.09 powder
13	538	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
14	537	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH3(CH2)16CH2OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
15	536	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II

16	533	41 - T_FoodAdditives2	T_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
17	532	185 - ATR-Polymer2	D_PVC with AdipicEster	Polyvinylchloride with Adipic Ester DuraSamplIR
18	530	126 - IRs ATR Reagent2	126	Sodium Acetate CH3COONa-3H2O ATR/diamond molecular weight:136.08 powder
19	529	34 - IRs Polymer2	PB	Polybutene ATR/diamond ATRcorrected
20	529	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
21	529	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
22	529	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
23	528	40 - IRs Reagent2	CAO	Calcium oxide [CaO] ORIGIN Date: 92/04/08 File: CAO.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
24	528	26 - IRs Polymer2	NYLON12	Nylon 12 Film
25	528	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH3)2 ATR/diamond molecular weight:73.10 liquid
26	527	7 - IRs Reagent2	AL2O3	Alminum oxide [Al2O3] ORIGIN Date: 92/04/08 File: AL2O3.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES

27	527	3 - IRs Polymer2	ARABIC	Arabic gum Film
28	527	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
29	526	36 - A_FoodAdditives2	A_Natamycin-4	Natamycin(Sales origin;Toronto Research Chemicals Inc.)@DuraSamplIR2(diamond)
30	526	100 - IRs Pharmaceuticals	AMIKACIN SULPHATE	AMIKACIN SULPHATE Formula: C22H43N5O13.2H2SO4 MW; 781.76 (CONTROL NO. T 197089) ASEAN REFERENCE STANDARD (4-9-2002) LOSS ON DRYING - (2.62%) . EACH MG IS EQUIVALENT TO 680 IU OF AMIKACIN ON THE
31	525	19 - T-Organic2	DiethylPhthalate	DiethylPhthalate Transmission
32	525	186 - IRs Agrochemicals	PAP	PAP Standard ATR method(KRS-5 prism)
33	524	47 - IRs Polymer2	PINENE	Pinene [C10H16] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
34	524	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
35	524	78 - IRs Reagent2	PINENE	Pinene [C10C16] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
36	524	105 - IRs Pharmaceuticals	VINCRISTINE SULPHATE	VINCRISTINE SULPHATE Formula: C46H56N4O10.H2SO4 MW; 923.04 (WORKING STANDARD) (CHEMICAL WORK OF GEDEON RICHTER LTD.
37	524	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
38	523	156 - IRs Pharmaceuticals	Actinomycin D	Actinomycin D formula : C62H86N12O16 ATR/diamond molecular weight : 1255.42
39	523	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
40	522	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
41	522	177 - IRs ATR Reagent2	177	1-Amino-2-naphthol-4-sulfonic Acid C10H9NO4S ATR/diamond molecular weight:239.25 powder
42	522	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR

43	522	32 - T_FoodAdditives2	T_Cinnamaldehyde-4	Cinnamaldehyde(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
44	521	43 - T-Organic2	T_butter	butter Transmission(Microscope)
45	521	42 - A_FoodAdditives2	A_Microfibrillated Cellulose_100F-4	Microfibrillated Cellulose(Product name;CELISH FD-100FC Sales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
46	521	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
47	520	160 - IRs ATR Reagent2	160	2,4-Dinitrophenylhydrazine C6H3(NO <sub>2</sub> ) <sub>2</sub> NHNH <sub>2</sub> ATR/diamond molecular weight:198.14 powder
48	520	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)
49	519	209 - IRs Agrichemicals	Dibutyl Phthalate-d4	Dibutyl Phthalate-d4 Standard ATR method(KRS-5 prism)
50	519	109 - IRs ATR Reagent2	109	Butylated Hydroxytoluene C <sub>15</sub> H <sub>24</sub> O ATR/diamond molecular weight:220.36 powder



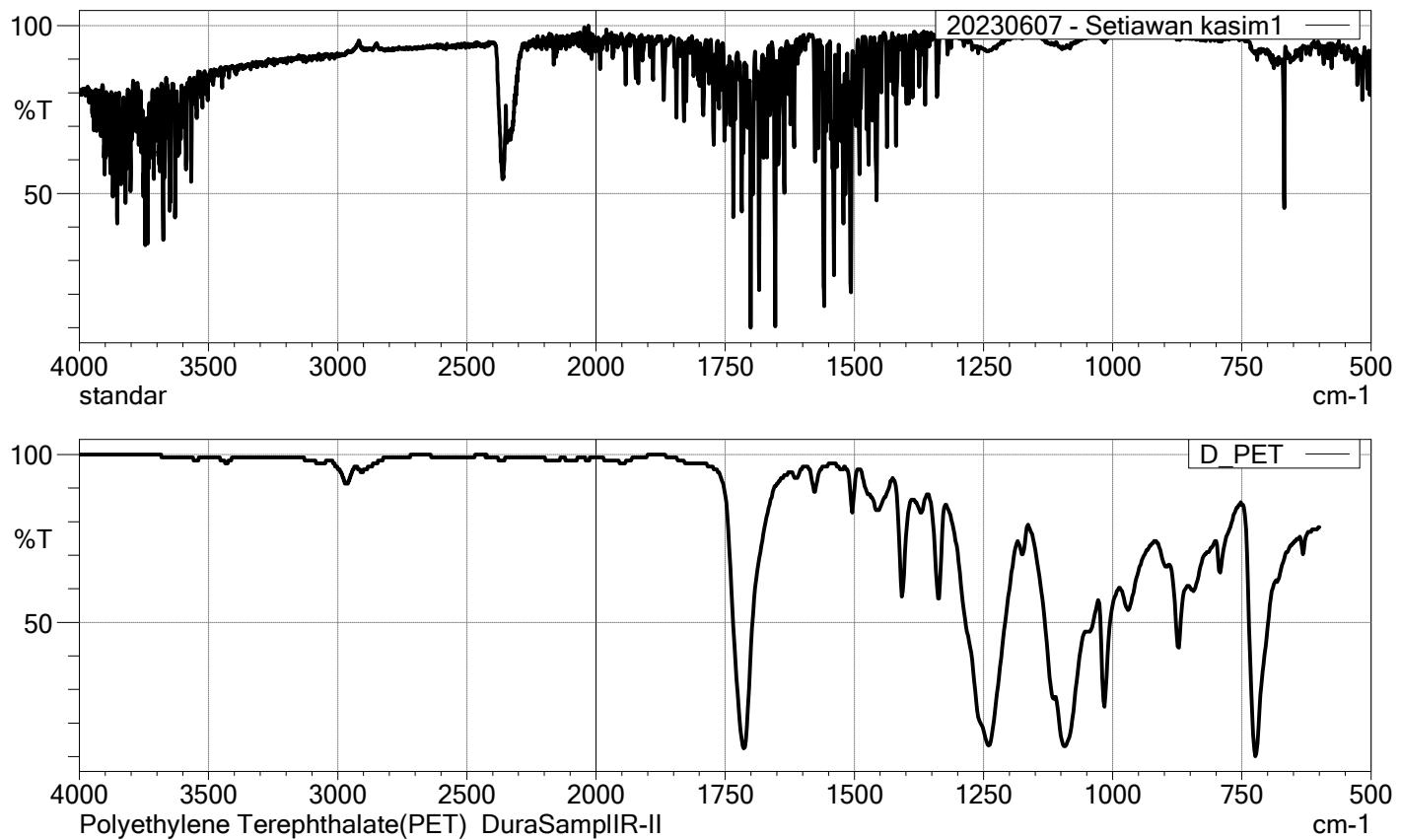
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	Score	Library	Name	Comment
1	548	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
2	547	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
3	543	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
4	540	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
5	540	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid
6	539	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II

7	538	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
8	538	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
9	536	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
10	536	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
11	534	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
12	533	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR
13	532	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
14	532	26 - IRs Polymer2	NYLON12	Nylone 12 Film
15	531	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
16	531	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
17	530	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)
18	529	209 - IRs Agrichemicals	Dibutyl Phthalate-d4	Dibutyl Phthalate-d4 Standard ATR method(KRS-5 prism)
19	528	149 - IRs ATR Reagent2	149	Ammonium Metavanadate NH <sub>4</sub> VO <sub>3</sub> ATR/diamond molecular weight:116.98 powder
20	528	10 - T-Organic2	Paraffin	Liquid Paraffin Transmission
21	528	43 - T-Organic2	T_butter	butter Transmission(Microscope)
22	528	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
23	528	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
24	527	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)

25	527	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
26	526	156 - IRs Pharmaceuticals	Actinomycin D	Actinomycin D formula : C62H86N12O16 ATR/diamond molecular weight : 1255.42
27	526	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamo nd)
28	525	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
29	525	4 - IRs Polymer2	ARAMID	ARAMID fiber ATR/diamond ATRcorrected
30	525	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
31	525	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH3)2 ATR/diamond molecular weight:73.10 liquid
32	524	34 - IRs Polymer2	PB	Polybutene ATR/diamond ATRcorrected
33	524	160 - IRs ATR Reagent2	160	2,4-Dinitrophenylhydrazine C6H3(NO2)2NHNH2 ATR/diamond molecular weight:198.14 powder
34	523	186 - IRs Agrochemicals	PAP	PAP Standard ATR method(KRS-5 prism)
35	523	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
36	523	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between

37	523	126 - IRs ATR Reagent2	126	Sodium Acetate CH <sub>3</sub> COONa-3H <sub>2</sub> O ATR/diamond molecular weight:136.08 powder
38	520	37 - ATR-Organic2	D_StearateZn	Zn Stearate_DuraSamplIR
39	520	74 - IRs Agrichemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
40	519	121 - T-Polymer2	T_PE_Chlorinated-1	Polyethylene, Chlorinated(Chlorine content 25%) with TALC Transmission(Microscope)
41	519	68 - IRs Agrichemicals	CVMP	CVMP Standard ATR method(KRS-5 prism)
42	518	53 - IRs Agrichemicals	EDDP	EDDP Standard ATR method(KRS-5 prism)
43	517	25 - ATR-Polymer2	D_PS	Polystyrene(PS) DuraSamplIR-I
44	515	98 - T-Polymer2	T_Ethylene_AcrylicAcid	Ethylene/Acrylic Acid Copolymer(Acrylic Acid content 20%)
45	514	177 - IRs ATR Reagent2	177	1-Amino-2-naphthol-4-sulfonic Acid C <sub>10</sub> H <sub>9</sub> NO <sub>4</sub> S ATR/diamond molecular weight:239.25 powder
46	514	183 - IRs ATR Reagent2	183	Thymol Blue C <sub>27</sub> H <sub>30</sub> O <sub>5</sub> S ATR/diamond molecular weight:466.60 powder
47	514	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
48	513	159 - ATR-Polymer2	D_PTFE2	Poly(Tetrafluoroethylene) DuraSamplIR-II
49	513	26 - IRs ATR Reagent2	26	Cholic Acid C <sub>24</sub> H <sub>40</sub> O <sub>5</sub> ATR/diamond molecular weight:408.58 powder
50	511	93 - T-Polymer2	T_Cellulose_Acetate	Cellulose Acetate(Acetyl content 39.8%) Transmission(Microscope)



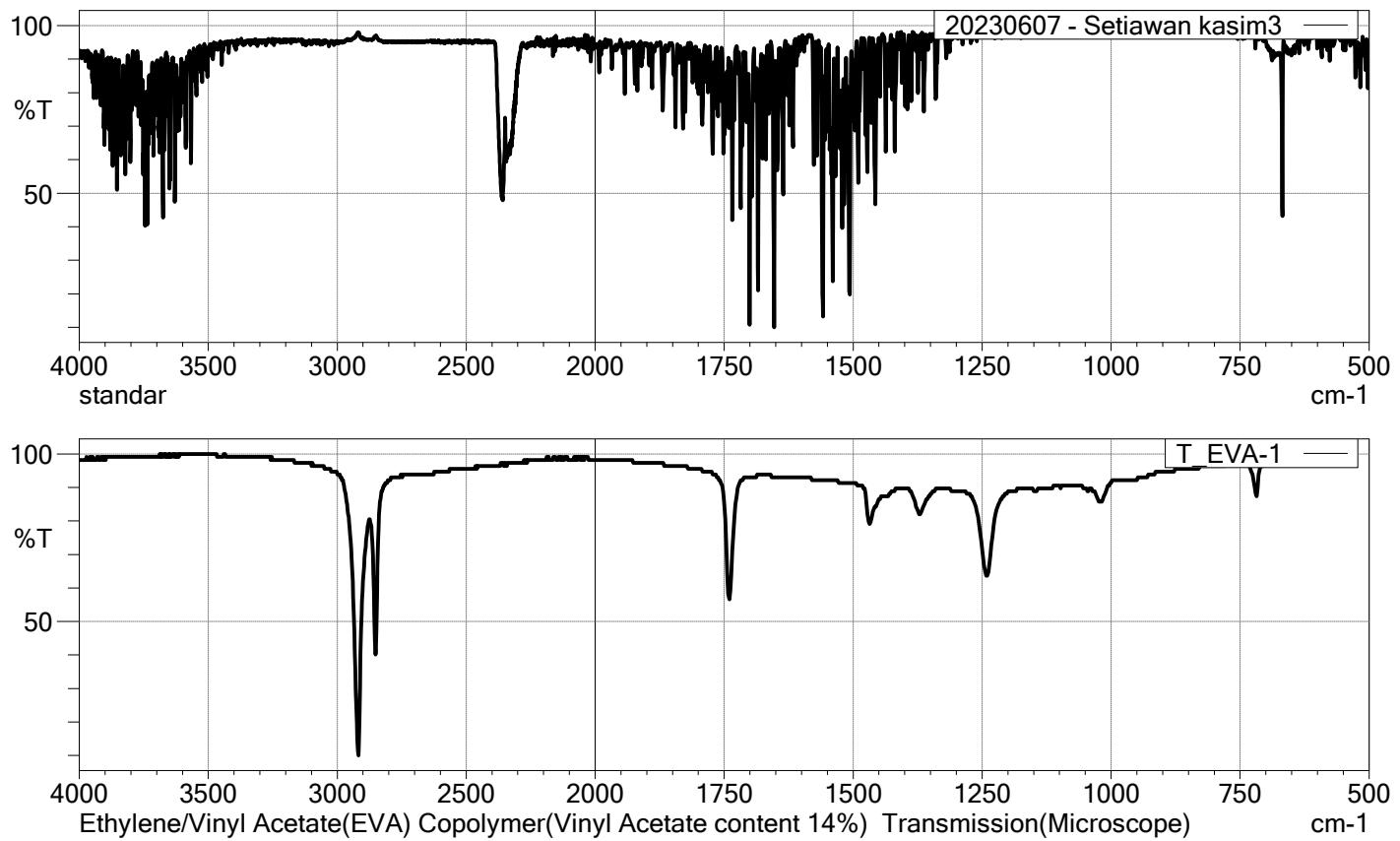
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	Score	Library	Name	Comment
1	590	79 - ATR-Polymer2	D_PET	Polyethylene Terephthalate(PET)
2	588	50 - ATR-Polymer2	D_Polyester4	Polyester Film(TOYOBESTER FILM & ESPET FILM) DuraSamplIR-II
3	586	48 - ATR-Polymer2	D_Polyester2	Polyester Film(TAIKO-FE) DuraSamplIR-II
4	582	125 - ATR-Polymer2	D_PET2	Poly(Ethylene Terephthalate)(PET) DuraSamplIR-II
5	582	41 - IRs Polymer2	PET	,o,d,s, Poly(ethylene terephthalate) ATR/DIAMOND ATRcorrected
6	579	87 - IRs Polymer2	PBT	PBT, Poly(butylene terephthalate) ATR/DIAMOND ATRcorrected
7	577	49 - ATR-Polymer2	D_Polyester3	Polyester Film(SEKISUI ESTINA P320-P321) DuraSamplIR-II
8	576	86 - ATR-Polymer2	D_PBT	Polybutylene Terephthalate(PBT)
9	572	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
10	567	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
11	567	114 - ATR-Polymer2	D_N_Vinylpyrrolidone_Vinyl_Acetate	Vinylpyrrolidone/Vinyl Acetate 60/40 Copolymer

12	567	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II
13	566	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
14	566	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
15	564	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
16	563	49 - T-Polymer2	Polyester	Polyester Film(SEKISUI ESTINA P320-P321) Transmission(Microscope)
17	562	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
18	562	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
19	561	43 - T-Organic2	T_butter	butter Transmission(Microscope)
20	561	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
21	561	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR
22	561	8 - ATR-Organic2	D_Oleamide	Oleamide DuraSamplIR
23	560	79 - T-Polymer2	PET	Polyethylene Terephthalate(PET)
24	558	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
25	557	188 - ATR-Polymer2	D_PVC with TerephthalicEster	Polyvinylchloride with BIS(2-Ethylhexyl)Terephthalate DuraSamplIR
26	557	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
27	557	74 - T-Polymer2	PAR	Polyarylate(PAR) Transmission(Microscope)
28	556	210 - IRs ATR Reagent2	210	n-Nonyl Alcohol CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> CH <sub>2</sub> OH ATR/diamond molecular weight:144.26 liquid
29	555	83 - IRs Reagent2	STEA_MG	Magnesium Stearate [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COO] <sub>2</sub> Mg ATR-Diamond ATRcorrected
30	555	10 - T-Organic2	Paraffin	Liquid Paraffin Transmission

31	555	7 - ATR-Organic2	D_Stearamide	Stearamide DuraSamplIR
32	554	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
33	554	74 - ATR-Polymer2	D_PAR	Polyarylate(PAR) DuraSamplIR-
34	554	29 - T-Polymer2	Polybuten	Polybuten Transmission(Microscope)
35	554	48 - T-Polymer2	Polyester	Polyester Film(TAIKO-FE) Transmission(Microscope)
36	553	245 - IRs ATR Reagent2	245	Diethyl Carbonate (C2H5)2CO3 ATR/diamond molecular weight:118.13 liquid
37	553	16 - IRs Polymer2	IONOMER1	Ionomer (Na Type) Surlyn1601 Film
38	553	32 - IRs Polymer2	PA	Polyarylate ATR/diamond ATRcorrected
39	553	44 - T-Organic2	T_margarine	margarine Transmission(Microscope)
40	553	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
41	553	121 - T-Polymer2	T_PE_Chlorinated-1	Polyethylene, Chlorinated(Chlorine content 25%) with TALC Transmission(Microscope)
42	552	44 - ATR-Organic2	D_Lecithin	Lecithin DuraSamplIR
43	552	22 - A_FoodAdditives2	A_Isoamyl Formate-4	Isoamyl Formate(Sales origin;TOKYO CHEMICAL INDUSTRY CO.,LTD.)@DuraSamplIR2(diamond)
44	552	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
45	552	53 - T-Polymer2	PI	Polyimide(Electronic Parts) Transmission(Microscope)
46	551	237 - IRs ATR Reagent2	237	Methyl Methacrylate, Monomer CH2C(CH3)COOCH3 ATR/diamond molecular weight:100.12 liquid
47	551	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between
48	550	128 - T-Polymer2	T_Poly_1_Butene	Poly(1-Butene), Isotactic Transmission(Microscope)

49	550	255 - IRs ATR Reagent2	255	n-Propyl Acetate CH <sub>3</sub> COOCH <sub>2</sub> CH <sub>2</sub> CH <sub>3</sub> ATR/diamond molecular weight: liquid
50	549	36 - ATR-Organic2	D_StearateMg	Mg Stearate DuraSamplIR



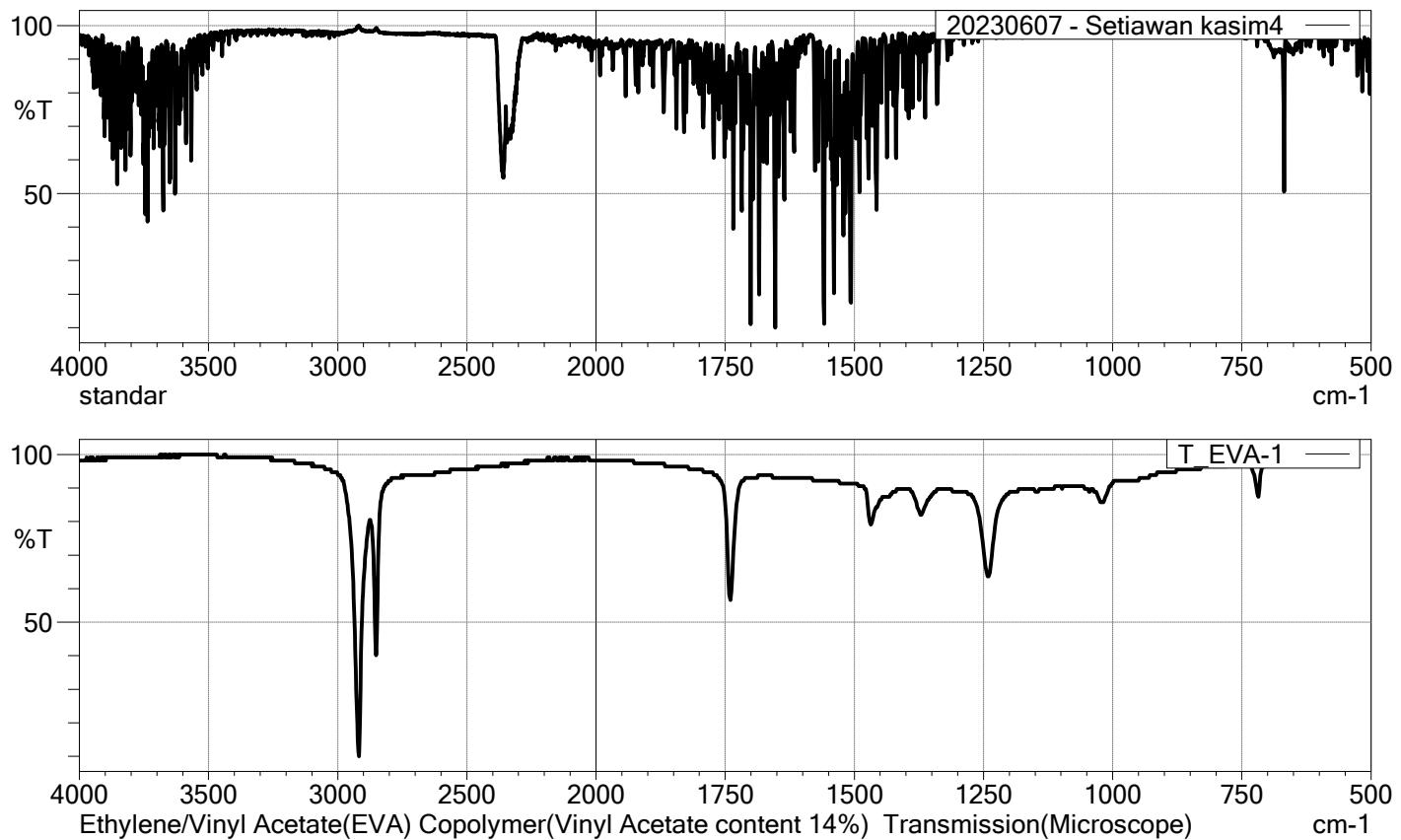
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	Score	Library	Name	Comment
1	567	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
2	566	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
3	565	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
4	562	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
5	561	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II
6	561	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
7	559	121 - T-Polymer2	T_PE_Chlorinated-1	Polyethylene, Chlorinated(Chlorine content 25%) with TALC Transmission(Microscope)
8	558	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
9	558	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
10	557	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR

11	555	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
12	554	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
13	552	44 - ATR-Organic2	D_Lecithin	Lecithin_DuraSamplIR
14	552	10 - T-Organic2	Paraffin	Liquid Paraffin Transmission
15	552	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
16	551	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
17	550	7 - ATR-Organic2	D_Stearamide	Stearamide DuraSamplIR
18	550	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
19	550	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
20	550	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
21	548	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between
22	547	16 - IRs Polymer2	IONOMER1	Ionomer (Na Type) Surlyn1601 Film
23	547	43 - T-Organic2	T_butter	butter Transmission(Microscope)
24	546	210 - IRs ATR Reagent2	210	n-Nonyl Alcohol CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> CH <sub>2</sub> OH ATR/diamond molecular weight:144.26 liquid
25	546	125 - T-Polymer2	T_PE_Chlorosulfonated	Polyethylene, Chlorosulfonated with TALC Transmission(Microscope)
26	545	83 - IRs Reagent2	STEA_MG	Magnesium Stearate [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COO] <sub>2</sub> Mg ATR-Diamond ATRcorrected

27	543	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
28	543	29 - T-Polymer2	Polybuten	Polybuten Transmission(Microscope)
29	542	98 - T-Polymer2	T_Ethylene_AcrylicAcid	Ethylene/Acrylic Acid Copolymer(Acrylic Acid content 20%)
30	542	103 - T-Polymer2	T_EVA-4	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 28%)
31	541	71 - IRs Polymer2	VLDPE	Low Density Polyethylene Film
32	541	102 - T-Polymer2	T_EVA-3	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 25%)
33	541	128 - T-Polymer2	T_Poly_1_Butene	Poly(1-Butene), Isotactic Transmission(Microscope)
34	541	34 - IRs Polymer2	PB	Polybutene ATR/diamond ATRcorrected
35	541	100 - ATR-Polymer2	D_Ethylene_EthylAcrylate	Ethylene/Ethyl Acrylate Copolymer(Ethyl Acrylate content 18%) DuraSamplIR-II
36	540	26 - IRs Polymer2	NYLON12	Nylone 12 Film
37	540	23 - ATR-Polymer2	D_PE	Polyethylene(PE) DuraSamplIR-
38	538	128 - ATR-Polymer2	D_Poly_1_Butene	Poly(1-Butene), Isotactic DuraSamplIR-II
39	537	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
40	536	36 - ATR-Polymer2	D_EVOH	Ethylenevinylalcohol(EVOH) DuraSamplIR-II
41	535	217 - IRs ATR Reagent2	217	n-Heptyl Alcohol CH3(CH2)5CH2OH ATR/diamond molecular weight:116.20 liquid
42	533	123 - T-Polymer2	T_PE_Chlorinated-3	Polyethylene, Chlorinated(Chlorine content 42%) with TALC Transmission(Microscope)

43	532	126 - IRs ATR Reagent2	126	Sodium Acetate CH <sub>3</sub> COONa-3H <sub>2</sub> O ATR/diamond molecular weight:136.08 powder
44	532	44 - T-Organic2	T_margarine	margarine Transmission(Microscope)
45	532	55 - T-Polymer2	NR	Natural Rubber(NR) Transmission(Microscope)
46	531	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
47	531	20 - IRs Polymer2	LLDPE	Low Density Polyethylene Film
48	530	37 - ATR-Organic2	D_StearateZn	Zn Stearate DuraSamplIR
49	530	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid
50	529	19 - IRs Polymer2	LDPE	Low Density Polyethylene Film



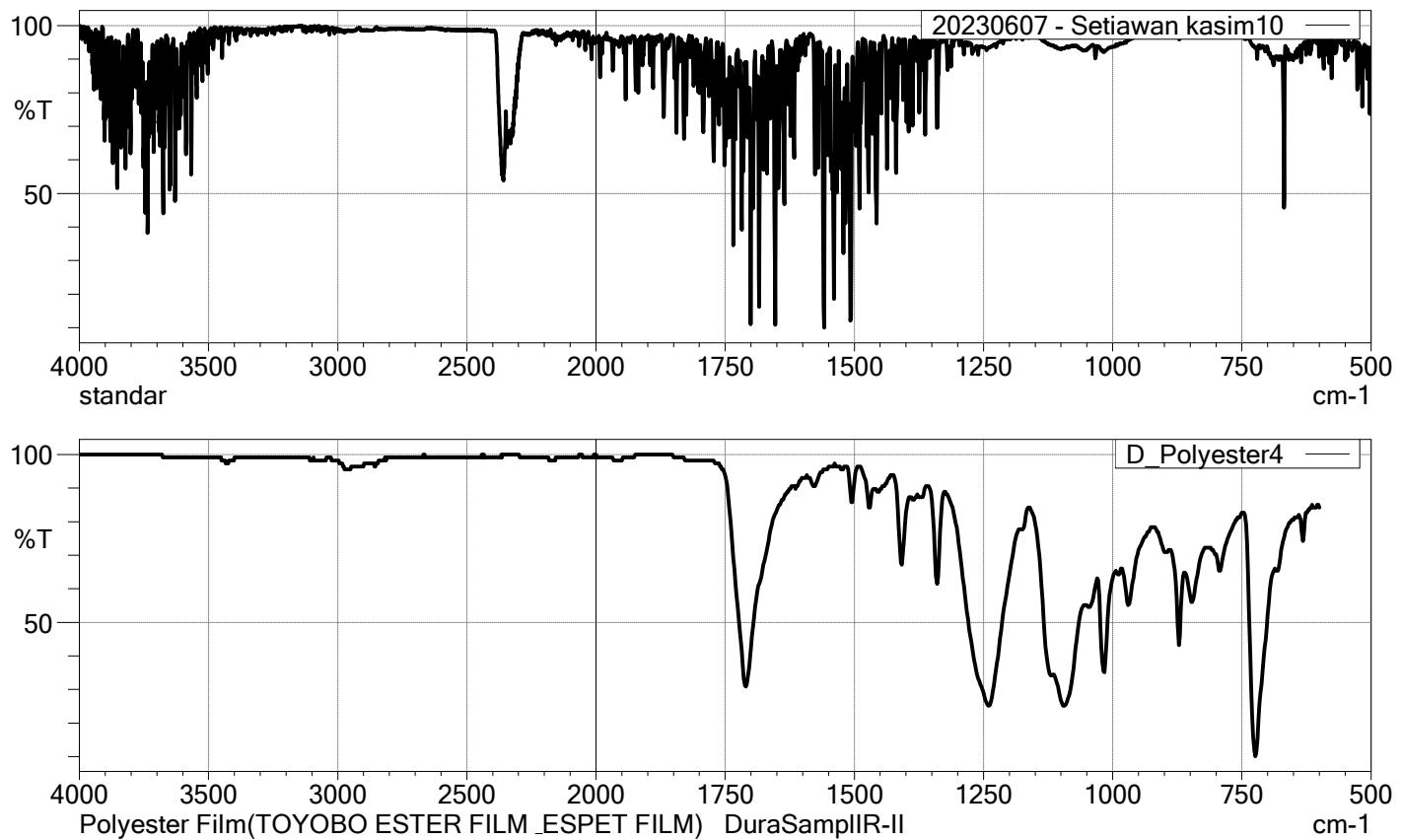
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	Score	Library	Name	Comment
1	555	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
2	554	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
3	550	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
4	548	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
5	548	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
6	548	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II
7	546	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
8	543	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)

9	543	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
10	543	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR
11	543	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
12	542	121 - T-Polymer2	T_PE_Chlorinated-1	Polyethylene, Chlorinated(Chlorine content 25%) with TALC Transmission(Microscope)
13	542	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
14	541	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
15	539	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
16	536	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
17	535	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)
18	535	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
19	533	34 - IRs Polymer2	PB	Polybutene ATR/diamond ATRcorrected
20	533	43 - T-Organic2	T_butter	butter Transmission(Microscope)
21	532	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na2S2O3 ATR/diamond molecular weight:158.11 liquid
22	531	174 - IRs Agrichemicals	alpha-BHC	alpha-BHC Standard ATR method(KRS-5 prism)
23	531	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between
24	531	71 - IRs Polymer2	VLDPE	Low Density Polyethylene Film
25	531	10 - T-Organic2	Paraffin	Liquid Paraffin Transmission
26	530	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
27	530	7 - ATR-Organic2	D_Stearamide	Stearamide DuraSamplIR

28	529	26 - IRs Polymer2	NYLON12	Nylone 12 Film
29	529	126 - IRs ATR Reagent2	126	Sodium Acetate CH <sub>3</sub> COONa-3H <sub>2</sub> O ATR/diamond molecular weight:136.08 powder
30	528	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
31	528	23 - ATR-Polymer2	D_PE	Polyethylene(PE) DuraSamplIR-
32	526	55 - IRs Polymer2	PS2	Polystyrene Film
33	525	51 - IRs ATR Reagent2	51	Phosphoric Acid H <sub>3</sub> PO <sub>4</sub> ATR/diamond molecular weight:98.00 liquid
34	525	210 - IRs ATR Reagent2	210	n-Nonyl Alcohol CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> CH <sub>2</sub> OH ATR/diamond molecular weight:144.26 liquid
35	525	44 - ATR-Organic2	D_Lecithin	Lecithin DuraSamplIR
36	524	78 - IRs Reagent2	PINENE	Pinene [C <sub>10</sub> H <sub>16</sub> ] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
37	524	47 - IRs Polymer2	PINENE	Pinene [C <sub>10</sub> H <sub>16</sub> ] ORIGIN Date: 92/02/21 File: PINENE.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
38	523	7 - IRs Reagent2	AL2O3	Alminum oxide [Al <sub>2</sub> O <sub>3</sub> ] ORIGIN Date: 92/04/08 File: AL2O3.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES

39	521	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
40	521	37 - ATR-Organic2	D_StearateZn	Zn Stearate DuraSamplIR
41	521	100 - ATR-Polymer2	D_Ethylene_EthylAcrylate	Ethylene/Ethyl Acrylate Copolymer(Ethyl Acrylate content 18%) DuraSamplIR-II
42	519	4 - IRs Polymer2	ARAMID	ARAMID fiber ATR/diamond ATRcorrected
43	519	98 - T-Polymer2	T_Ethylene_AcrylicAcid	Ethylene/Acrylic Acid Copolymer(Acrylic Acid content 20%)
44	519	89 - IRs Pharmaceuticals	BROMHEXINE HYDROCHLORIDE CRS	BROMHEXINE HYDROCHLORIDE CRS Formula; C14H20Br2N2.HCl MW; 412.59 (WORKING STANDARD) (EUROPEAN PHARMACOPOEIA BP)
45	519	3 - A_FoodAdditives2	A_Acetophenone-4	Acetophenone(Sales origin; Wako Pure Chemical Industries, Ltd.)@DuraSamplIR2(diamond)
46	518	168 - IRs ATR Reagent2	168	Sulfamic Acid H2NSO2OH ATR/diamond molecular weight:97.10 powder
47	517	44 - T-Organic2	T_margarine	margarine Transmission(Microscope)
48	517	20 - ATR-Organic2	D_MethylMethacrylate	Methyl Methacrylate DuraSampl
49	515	74 - IRs Agrochemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
50	515	83 - IRs Polymer2	BR3	Polybutadiene High-trans Film



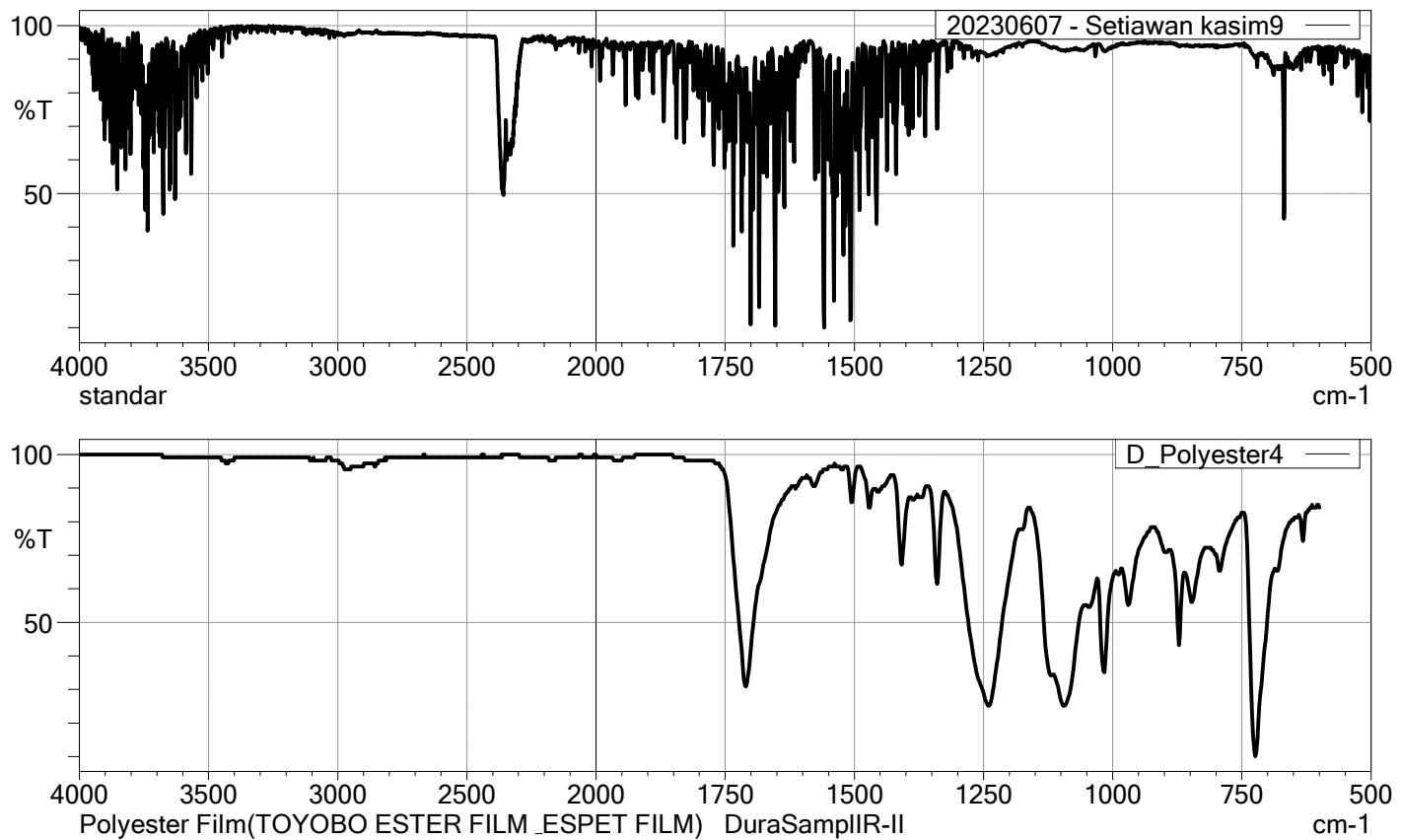
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	Score	Library	Name	Comment
1	569	50 - ATR-Polymer2	D_Polyester4	Polyester Film(TOYOBESTER FILM & ESPET FILM) DuraSamplIR-II
2	565	48 - ATR-Polymer2	D_Polyester2	Polyester Film(TAIKO-FE) DuraSamplIR-II
3	561	79 - ATR-Polymer2	D_PET	Polyethylene Terephthalate(PET)
4	552	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamo nd)
5	551	41 - A_FoodAdditives2	A_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose(Product name;VIVAPUR102CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamo nd)
6	551	44 - A_FoodAdditives2	A_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name;CELISH FD-200LCSales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
7	550	74 - T-Polymer2	PAR	Polyarylate(PAR) Transmission(Microscope)
8	548	79 - T-Polymer2	PET	Polyethylene Terephthalate(PET)

9	547	19 - IRs Reagent2	C3H6O2	Methyl acetate [CH3COOCH3] ORIGIN Date: 91/10/15 File: C3H6O2.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
10	546	49 - T-Polymer2	Polyester	Polyester Film(SEKISUI ESTINA P320-P321) Transmission(Microscope)
11	545	8 - ATR-Polymer2	D_Cellose2	Paper DuraSamplIR-II
12	545	125 - ATR-Polymer2	D_PET2	Poly(Ethylene Terephthalate)(PET) DuraSamplIR-II
13	545	50 - A_FoodAdditives2	A_Powdered Cellulose-4	Powdered Cellulosec(Product name;VITACEL L-600CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
14	545	87 - IRs Polymer2	PBT	PBT, Poly(butylene terephthalate) ATR/DIAMOND ATRcorrected
15	543	48 - T-Polymer2	Polyester	Polyester Film(TAIKO-FE) Transmission(Microscope)
16	542	74 - ATR-Polymer2	D_PAR	Polyarylate(PAR) DuraSamplIR
17	542	245 - IRs ATR Reagent2	245	Diethyl Carbonate (C2H5)2CO3 ATR/diamond molecular weight:118.13 liquid
18	542	32 - IRs Polymer2	PA	Polyarylate ATR/diamond ATRcorrected
19	541	8 - T-Polymer2	Paper	Paper Transmission(Microscope)
20	541	188 - ATR-Polymer2	D_PVC with TerephthalicEster	Polyvinylchloride with BIS(2-Ehylhexyl)Terephthalate DuraSamplIR
21	541	105 - IRs Pharmaceuticals	VINCRISTINE SULPHATE	VINCRISTINE SULPHATE Formula; C46H56N4O10.H2SO4 MW; 923.04 (WORKING STANDARD) (CHEMICAL WORK OF GEDEON RICHTER LTD.
22	540	12 - T-Polymer2	Ramie	Ramie Transmission(Microscope)
23	540	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
24	540	3 - IRs Polymer2	ARABIC	Arabic gum Film

25	539	40 - IRs Reagent2	CAO	Calcium oxide [CaO] ORIGIN Date: 92/04/08 File: CAO.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
26	539	42 - A_FoodAdditives2	A_Microfibrillated Cellulose_100F-4	Microfibrillated Cellulose(Product name;CELISH FD-100FCSales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
27	539	100 - IRs Pharmaceuticals	AMIKACIN SULPHATE	AMIKACIN SULPHATE Formula; C22H43N5O13.2H2SO4 MW; 781.76 (CONTROL NO. T 197089) ASEAN REFERENCE STANDARD (4-9-2002) LOSS ON DRYING - (2.62%) . EACH MG IS EQUIVALENT TO 680 IU OF AMIKACIN ON THE
28	538	10 - IRs Reagent2	BARBITAL	Barbital [5,5-diethylbarbituric acid] ORIGIN Date: 92/03/06 File: BARBITAL.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
29	537	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
30	537	74 - IRs Agrochemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
31	537	40 - ATR-Polymer2	D_FEP	Tetrafluoroethylene-Hexafluoropropylene(FEP) DuraSamplIR-II
32	537	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
33	536	95 - IRs ATR Reagent2	95	Polypropylene Glycol ROCH2CHORCH2OR R=-[CH2CH(OH3)O-] <sub>n</sub> H ATR/diamond average molecular weight:3000 liquid
34	536	39 - ATR-Polymer2	D_PTFE	Polytetrafluoroethylene(PTFE) DuraSamplIR-II
35	535	59 - IRs Polymer2	PVC-DR	Polyvinyl chloride [-CH2C(Cl)H-] <sub>n</sub> Film
36	535	110 - ATR-Polymer2	D_Hydroxypropyl_Methyl_Cellulose	Hydroxypropyl Methyl Cellulose(10% Hydroxypropyl, 30% Methoxyl) DuraSamplIR-II

37	535	34 - IRs Reagent2	C8H20O4	METHYL PHTHALATE [C6H4(COOCH3)2] ORIGIN Date: 91/10/15 File: C8H20O4.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
38	535	2 - IRs Reagent2	1PRO-OH	1-Propanol CH3CH2CH2OH ATR/diamond ATRcorrected
39	535	15 - IRs Polymer2	FEP	FEP,Tetrafluoroethylene Hexafluoropropylene ATR/diamond ATRcorrected
40	535	111 - ATR-Polymer2	D_Methyl_Cellulose	Methyl Cellulose(Methoxyl content 30%) DuraSamplIR-II
41	534	89 - IRs ATR Reagent2	89	Acetic Acid CH3COOH ATR/diamond molecular weight:60.05 liquid
42	534	82 - T-Polymer2	PCTFE	Polychloro-trifluoro-ethylene(PC TFE) Transmission(Microscope)
43	534	150 - IRs ATR Reagent2	150	Ceric Ammonium Sulfate, Dihydrate Ce(SO4)2-2(NH4)2SO4-2H2O ATR/diamond molecular weight:632.53 powder
44	534	186 - IRs Agrichemicals	PAP	PAP Standard ATR method(KRS-5 prism)
45	533	43 - A_FoodAdditives2	A_Microfibrillated Cellulose_100G-4	Microfibrillated Cellulose(Product name;CELISH FD-100GCSales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
46	533	49 - T_FoodAdditives2	T_Powdered Cellulose-4	Powdered Cellulosec(Product name;VITACEL L-600CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
47	533	43 - T_FoodAdditives2	T_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name;CELISH FD-200LCSales origin;Daicel Chemical Industries Ltd.)@KBr Wafer
48	533	125 - IRs Pharmaceuticals	Enviomycin Sulfate	Enviomycin Sulfate formula : C50H92N26O32S3 ATR/diamond molecular weight
49	532	129 - T-Polymer2	T_Poly_2_6_Dimethyl_p_Phenyl eneOxide	Poly(2,6-Dimethyl-p-Phenylene Oxide) Transmission(Microscope)
50	532	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)



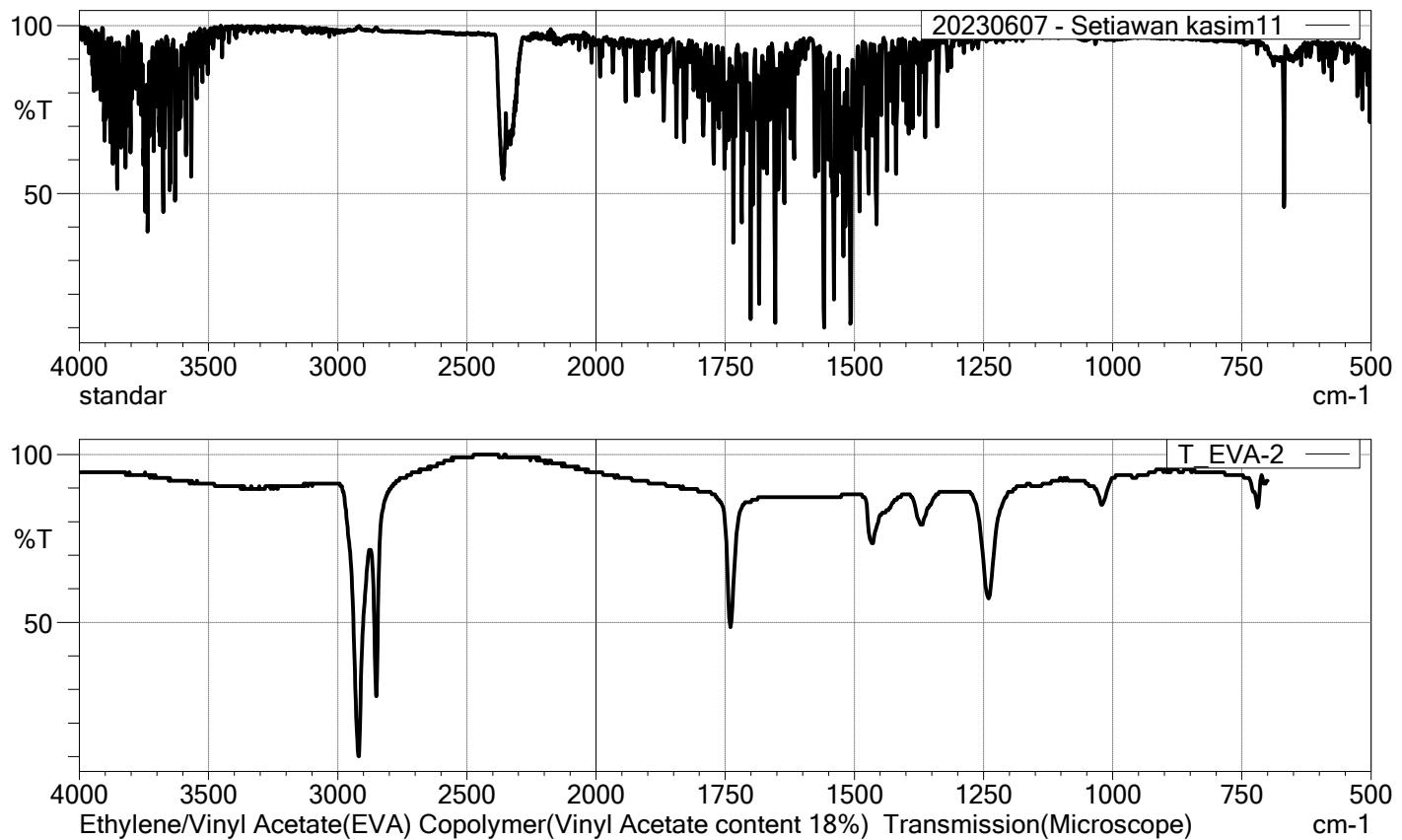
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	Score	Library	Name	Comment
1	564	50 - ATR-Polymer2	D_Polyester4	Polyester Film(TOYOBESTER FILM & ESPET FILM) DuraSamplIR-II
2	563	79 - ATR-Polymer2	D_PET	Polyethylene Terephthalate(PET)
3	557	48 - ATR-Polymer2	D_Polyester2	Polyester Film(TAIKO-FE) DuraSamplIR-II
4	551	125 - ATR-Polymer2	D_PET2	Poly(Ethylene Terephthalate)(PET) DuraSamplIR-II
5	550	87 - IRs Polymer2	PBT	PBT, Poly(butylene terephthalate) ATR/DIAMOND ATRcorrected
6	547	32 - IRs Polymer2	PA	Polyarylate ATR/diamond ATRcorrected
7	546	74 - ATR-Polymer2	D_PAR	Polyarylate(PAR) DuraSamplIR-
8	544	89 - IRs ATR Reagent2	89	Acetic Acid CH <sub>3</sub> COOH ATR/diamond molecular weight:60.05 liquid

9	543	177 - IRs ATR Reagent2	177	1-Amino-2-naphthol-4-sulfonic Acid C10H9NO4S ATR/diamond molecular weight:239.25 powder
10	542	74 - IRs Agrichemicals	Alachlor	Alachlor Standard ATR method(KRS-5 prism)
11	542	49 - T-Polymer2	Polyester	Polyester Film(SEKISUI ESTINA P320-P321) Transmission(Microscope)
12	541	74 - T-Polymer2	PAR	Polyarylate(PAR) Transmission(Microscope)
13	540	105 - IRs Pharmaceuticals	VINCRISTINE SULPHATE	VINCRISTINE SULPHATE Formula: C46H56N4O10.H2SO4 MW; 923.04 (WORKING STANDARD) (CHEMICAL WORK OF GEDEON RICHTER LTD.
14	539	186 - IRs Agrichemicals	PAP	PAP Standard ATR method(KRS-5 prism)
15	538	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)
16	537	49 - ATR-Polymer2	D_Polyester3	Polyester Film(SEKISUI ESTINA P320-P321) DuraSamplIR-II
17	537	79 - T-Polymer2	PET	Polyethylene Terephthalate(PET)
18	536	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
19	536	19 - IRs Reagent2	C3H6O2	Methyl acetate [CH3COOCH3] ORIGIN Date: 91/10/15 File: C3H6O2.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
20	536	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
21	536	114 - ATR-Polymer2	D_N_Vinylpyrrolidone_Vinyl_Acetate	Vinylpyrrolidone/Vinyl Acetate 60/40 Copolymer
22	536	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
23	535	149 - IRs ATR Reagent2	149	Ammonium Metavanadate NH4VO3 ATR/diamond molecular weight:116.98 powder

24	535	95 - IRs ATR Reagent2	95	Polypropylene Glycol ROCH <sub>2</sub> CHORCH <sub>2</sub> OR R=-[CH <sub>2</sub> CH(OH <sub>3</sub> )O-] <sub>n</sub> H ATR/diamond average molecular weight:3000 liquid
25	534	19 - T-Organic2	DiethylPhthalate	DiethylPhthalate Transmission
26	534	55 - IRs Polymer2	PS2	Polystyrene Film
27	533	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid
28	533	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C <sub>5</sub> H <sub>9</sub> NO ATR/diamond molecular weight:99.13 liquid
29	533	125 - IRs Pharmaceuticals	Enviomycin Sulfate	Enviomycin Sulfate formula : C <sub>50</sub> H <sub>92</sub> N <sub>26</sub> O <sub>32</sub> S <sub>3</sub> ATR/diamond molecular weight
30	533	93 - T-Polymer2	T_Cellulose_Acetate	Cellulose Acetate(Acetyl content 39.8%) Transmission(Microscope)
31	533	87 - T-Polymer2	PMMA	Polymethylmethacrylate(PMMA) Transmission(Microscope)
32	533	46 - T_FoodAdditives2	T_Ethyl Phenylacetate-4	Ethyl Phenylacetate(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
33	532	42 - T-Polymer2	Epoxy	Epoxy Adhesives Transmission(Microscope)
34	532	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
35	532	59 - IRs Polymer2	PVC-DR	Polyvinyl chloride [-CH <sub>2</sub> C(Cl)H-] <sub>n</sub> Film
36	532	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
37	532	92 - IRs Pharmaceuticals	BENZIL	BENZIL Formula; C <sub>14</sub> H <sub>10</sub> O <sub>2</sub> MW; 210.23 (WHO MELTING POINT REFERENCE STANDARD)

38	532	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
39	532	40 - ATR-Polymer2	D_FEP	Tetrafluoroethylene-Hexafluoropropylene(FEP) DuraSamplIR-II
40	531	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
41	531	19 - ATR-Polymer2	D_Polyamide7	Polyamide(Amorphous Nylon) DuraSamplIR-II
42	530	48 - T-Polymer2	Polyester	Polyester Film(TAIKO-FE) Transmission(Microscope)
43	530	245 - IRs ATR Reagent2	245	Diethyl Carbonate (C2H5)2CO3 ATR/diamond molecular weight:118.13 liquid
44	530	40 - IRs Reagent2	CAO	Calcium oxide [CaO] ORIGIN Date: 92/04/08 File: CAO.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
45	530	188 - ATR-Polymer2	D_PVC with TerephthalicEster	Polyvinylchloride with BIS(2-Ehylhexyl)Terephthalate DuraSamplIR
46	529	52 - T-Polymer2	PI	Polyimide(KAPTON) Transmission(Microscope)
47	528	164 - IRs ATR Reagent2	164	Dithizone C13H12N4S ATR/diamond molecular weight:256.33 powder
48	528	65 - IRs Polymer2	SILICO2	Silicone rubber ATR/diamond ATRcorrected
49	528	20 - ATR-Organic2	D_MethylMethacrylate	Methyl Methacrylate DuraSampl
50	528	39 - ATR-Polymer2	D_PTFE	Polytetrafluoroethylene(PTFE) DuraSamplIR-II



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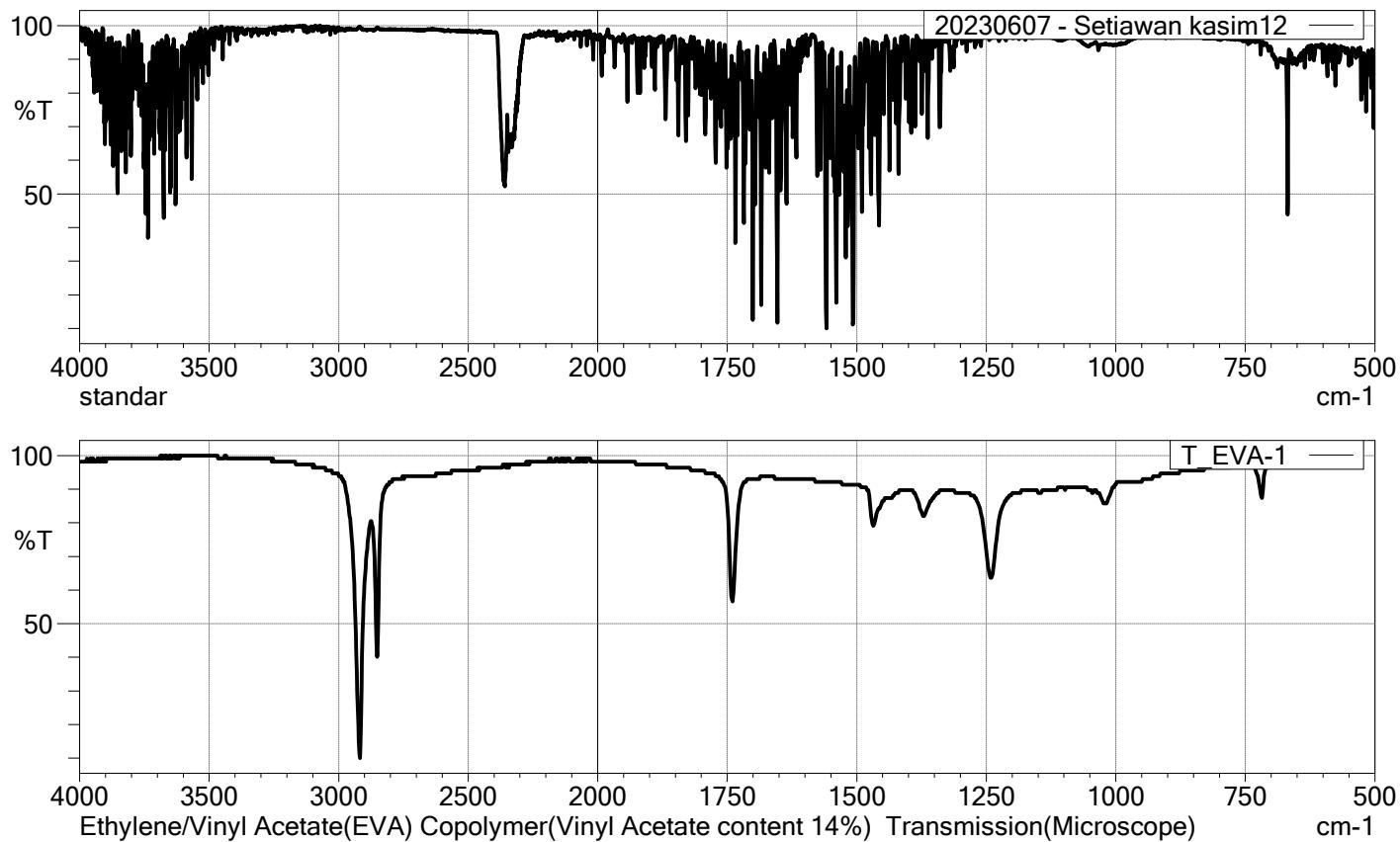
	Score	Library	Name	Comment
1	544	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
2	543	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
3	543	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
4	542	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
5	537	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
6	536	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
7	535	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ATR/diamond molecular weight:158.11 liquid

8	534	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
9	534	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
10	533	77 - IRs Polymer2	DLTDP	DLTDP ANTIODANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
11	533	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II
12	532	26 - IRs Polymer2	NYLON12	Nylone 12 Film
13	532	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
14	531	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
15	530	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
16	529	126 - T-Polymer2	T_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%)
17	529	36 - A_FoodAdditives2	A_Natamycin-4	Natamycin(Sales origin;Toronto Research Chemicals Inc.)@DuraSamplIR2(diamond)
18	528	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
19	527	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
20	525	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR
21	525	63 - A_FoodAdditives2	A_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries,
22	523	54 - IRs Agrichemicals	Echlomezol	Echlomezol Standard ATR method(KRS-5 prism)

23	523	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
24	523	43 - T-Organic2	T_butter	butter Transmission(Microscope)
25	522	1 - IRs Agrichemicals	Chinomethionate	Chinomethionate Standard ATR method(KRS-5 prism)
26	522	4 - T-Polymer2	EAA	Ethylene Acrylic Acid(EAA) Transmission(Microscope)
27	522	37 - ATR-Organic2	D_StearateZn	Zn Stearate DuraSamplIR
28	522	55 - IRs Polymer2	PS2	Polystyrene Film
29	522	121 - T-Polymer2	T_PE_Chlorinated-1	Polyethylene, Chlorinated(Chlorine content 25%) with TALC Transmission(Microscope)
30	522	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH3)2 ATR/diamond molecular weight:73.10 liquid
31	522	168 - IRs ATR Reagent2	168	Sulfamic Acid H2NSO2OH ATR/diamond molecular weight:97.10 powder
32	521	10 - T-Organic2	Paraffin	Liquid Paraffin Transmission
33	521	34 - T_FoodAdditives2	T_Ethyl Decanoate-4	Ethyl Decanoate(Product name;Ethyl n-caprateCSales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
34	521	160 - IRs ATR Reagent2	160	2,4-Dinitrophenylhydrazine C6H3(NO2)2NHNH2 ATR/diamond molecular weight:198.14 powder
35	520	186 - IRs Agrichemicals	PAP	PAP Standard ATR method(KRS-5 prism)
36	519	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamoind)

37	519	149 - IRs ATR Reagent2	149	Ammonium Metavanadate NH4VO3 ATR/diamond molecular weight:116.98 powder
38	518	2 - IRs Reagent2	1PRO-OH	1-Propanol CH3CH2CH2OH ATR/diamond ATRcorrected
39	517	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
40	517	93 - T-Polymer2	T_Cellulose_Acetate	Cellulose Acetate(Acetyl content 39.8%) Transmission(Microscope)
41	516	26 - IRs ATR Reagent2	26	Cholic Acid C24H40O5 ATR/diamond molecular weight:408.58 powder
42	516	96 - T-Polymer2	T_Cellulose_Triacetate	Cellulose Triacetate(43.6% acetyl content) Transmission(Microscope)
43	516	164 - IRs ATR Reagent2	164	Dithizone C13H12N4S ATR/diamond molecular weight:256.33 powder
44	514	175 - IRs ATR Reagent2	175	Carbazole C12H9N ATR/diamond molecular weight:167.21 powder
45	514	62 - T_FoodAdditives2	T_Liquid Paraffin-4	Liquid Paraffin(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between
46	514	32 - T_FoodAdditives2	T_Cinnamaldehyde-4	Cinnamaldehyde(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
47	514	16 - T_FoodAdditives2	T_Eugenol-4	Eugenol(Sales origin;Wako Pure Chemical Industries, Ltd.)@Between Salts(KBr)
48	514	177 - IRs ATR Reagent2	177	1-Amino-2-naphthol-4-sulfonic Acid C10H9NO4S ATR/diamond molecular weight:239.25 powder

49	514	234 - IRs ATR Reagent2	234	3,4-Benzopyrene C <sub>20</sub> H <sub>12</sub> ATR/diamond molecular weight:252.32 powder
50	513	34 - IRs Pharmaceuticals	LANATOSIDE C	LANATOSIDE C Formula; C <sub>49</sub> H <sub>76</sub> O <sub>20</sub> MW; 985.13 (INTERNATIONAL CHEMICAL REFERENCE SUBSTANCE) CONTROL NO.281022



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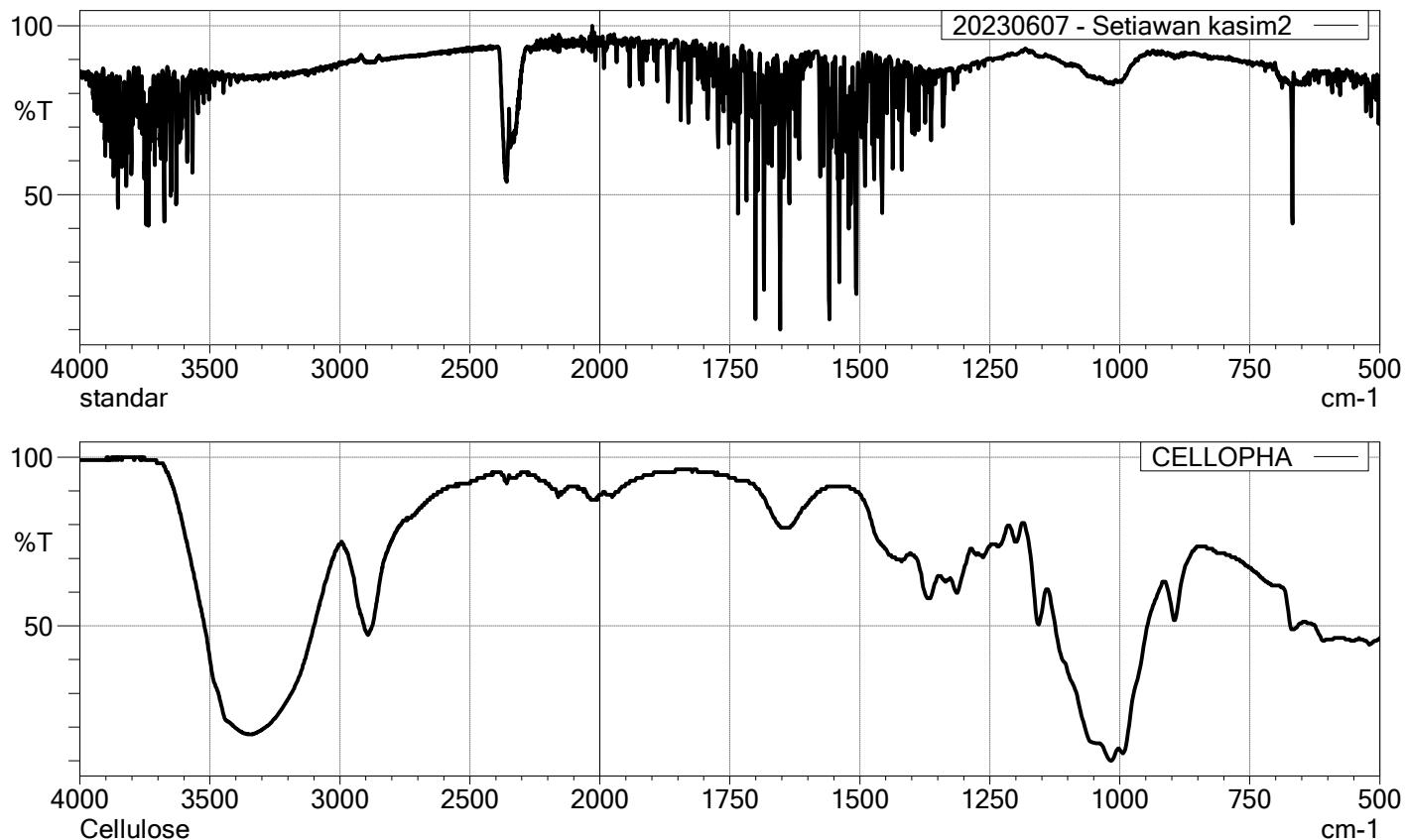
	Score	Library	Name	Comment
1	555	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
2	552	41 - A_FoodAdditives2	A_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose(Product name;VIVAPUR102CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
3	549	44 - A_FoodAdditives2	A_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name;CELISH FD-200LCSales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
4	549	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
5	544	50 - A_FoodAdditives2	A_Powdered Cellulose-4	Powdered Cellulose(sec)(Product name;VITACEL L-600CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)

6	536	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
7	536	51 - IRs ATR Reagent2	51	Phosphoric Acid H3PO4 ATR/diamond molecular weight:98.00 liquid
8	535	100 - IRs Pharmaceuticals	AMIKACIN SULPHATE	AMIKACIN SULPHATE Formula; C22H43N5O13.2H2SO4 MW; 781.76 (CONTROL NO. T 197089) ASEAN REFERENCE STANDARD (4-9-2002) LOSS ON DRYING - (2.62%). EACH MG IS EQUIVALENT TO 680 IU OF AMIKACIN ON THE
9	534	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)
10	534	43 - T_FoodAdditives2	T_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name; CELISH FD-200LC Sales origin; Daicel Chemical Industries Ltd.)@KBr Wafer
11	533	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
12	532	41 - T_FoodAdditives2	T_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name; VIVAPUR101C Sales origin; TOAKASEI CO.,LTD.)@KBr Wafer
13	532	116 - IRs ATR Reagent2	116	0.01mol/l Sodium Thiosulfate Solution Na2S2O3 ATR/diamond molecular weight:158.11 liquid
14	529	97 - IRs Pharmaceuticals	AMPICILLIN TRIHYDRATE	AMPICILLIN TRIHYDRATE Formula; C16H19N3O4S.3H2O MW; 349.41 (ASEAN REFERENCE STANDARD) CONTROL NO. T 295002 WATER (13.48%) ASSAY (961.4 mcg/mg)
15	528	102 - ATR-Polymer2	D_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%) DuraSamplIR-II
16	528	156 - IRs Pharmaceuticals	Actinomycin D	Actinomycin D formula : C62H86N12O16 ATR/diamond molecular weight : 1255.42
17	527	49 - T_FoodAdditives2	T_Powdered Cellulose-4	Powdered Cellulosec(Product name; VITACEL L-600C Sales origin; TOAKASEI CO.,LTD.)@KBr Wafer

18	527	168 - IRs ATR Reagent2	168	Sulfamic Acid H <sub>2</sub> NSO <sub>2</sub> OH ATR/diamond molecular weight:97.10 powder
19	526	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
20	526	18 - T-Organic2	DimethylPhthalate	DimethylPhthalate Transmission
21	525	3 - IRs Polymer2	ARABIC	Arabic gum Film
22	525	59 - IRs Polymer2	PVC-DR	Polyvinyl chloride [-CH <sub>2</sub> C(Cl)H-] <sub>n</sub> Film
23	524	57 - T_FoodAdditives2	T_DL-Methionine-4	DL-Methionine(Sales origin;Wako Pure Chemical Industries, Ltd.)@KBr Wafer
24	524	106 - IRs ATR Reagent2	106	N,N-Dimethylformamide HCON(CH <sub>3</sub> ) <sub>2</sub> ATR/diamond molecular weight:73.10 liquid
25	523	57 - IRs Reagent2	I-BUOH-2	Isobutyl alcohol(gas) [(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> OH ; 2-methyl-1-propanol] ORIGIN Date: 92/12/01 File: I-BUOH.DX INFRARED SPECTROPHOTOMETER GC/FTIR-X
26	522	42 - A_FoodAdditives2	A_Microfibrillated Cellulose_100F-4	Microfibrillated Cellulose(Product name;CELISH FD-100FC Sales origin;Daicel Chemical Industries Ltd.)@DuraSamplIR2(diamond)
27	522	140 - IRs Pharmaceuticals	Cefotiam Hexetil Hydrochloride	Cefotiam Hexetil Hydrochloride formula : C <sub>27</sub> H <sub>37</sub> N <sub>9</sub> O <sub>7</sub> S <sub>3</sub> .2HCl ATR/diamond molecular weight : 768.76
28	522	105 - IRs Pharmaceuticals	VINCRISTINE SULPHATE	VINCRISTINE SULPHATE Formula; C <sub>46</sub> H <sub>56</sub> N <sub>4</sub> O <sub>10</sub> .H <sub>2</sub> SO <sub>4</sub> MW; 923.04 (WORKING STANDARD) (CHEMICAL WORK OF GEDEON RICHTER LTD.
29	521	68 - IRs Agrochemicals	CVMP	CVMP Standard ATR method(KRS-5 prism)
30	520	43 - ATR-Organic2	D_HumicAcid	HumicAcid DuraSamplIR
31	520	1 - IRs Agrochemicals	Chinomethionate	Chinomethionate Standard ATR method(KRS-5 prism)

32	520	19 - T-Organic2	DiethylPhthalate	DiethylPhthalate_Transmission
33	520	89 - IRs ATR Reagent2	89	Acetic Acid CH <sub>3</sub> COOH ATR/diamond molecular weight:60.05 liquid
34	519	2 - IRs Reagent2	1PRO-OH	1-Propanol CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> OH ATR/diamond ATRcorrected
35	519	26 - IRs ATR Reagent2	26	Cholic Acid C <sub>24</sub> H <sub>40</sub> O <sub>5</sub> ATR/diamond molecular weight:408.58 powder
36	518	64 - T-Polymer2	Irganox 1076	Polymer Additive(Irganox 1076) Transmission(Microscope)
37	518	25 - ATR-Polymer2	D_PS	Polystyrene(PS) DuraSamplIR-I
38	518	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
39	517	83 - IRs Agrichemicals	Diazinon Oxon	Diazinon Oxon Standard ATR method(KRS-5 prism)
40	517	126 - IRs ATR Reagent2	126	Sodium Acetate CH <sub>3</sub> COONa-3H <sub>2</sub> O ATR/diamond molecular weight:136.08 powder
41	517	70 - IRs Reagent2	NA <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	Sodium Hydrosulfite [Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> ] ORIGIN Date: 92/04/08 File: NA <sub>2</sub> S <sub>2</sub> O <sub>4</sub> .DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
42	516	175 - IRs ATR Reagent2	175	Carbazole C <sub>12</sub> H <sub>9</sub> N ATR/diamond molecular weight:167.21 powder
43	515	186 - IRs Agrichemicals	PAP	PAP Standard ATR method(KRS-5 prism)
44	515	67 - IRs Reagent2	M-E-TONE	Methyl Ethyl Ketone CH <sub>3</sub> C(=O)C <sub>2</sub> H <sub>5</sub> ATR/diamond ATRcorrected
45	514	71 - IRs Pharmaceuticals	CORTISONE	CORTISONE Formula; C <sub>21</sub> H <sub>28</sub> O <sub>5</sub> MW; 360.45 (ASEAN REFERENCE STANDARD)

46	514	125 - IRs ATR Reagent2	125	Tartaric Acid C <sub>2</sub> H <sub>2</sub> (OH) <sub>2</sub> (COOH) <sub>2</sub> ATR/diamond molecular weight:150.09 powder
47	513	82 - T-Polymer2	PCTFE	Polychloro-trifluoro-ethylene(PC TFE) Transmission(Microscope)
48	512	96 - T-Polymer2	T_Cellulose_Triacetate	Cellulose Triacetate(43.6% acetyl content) Transmission(Microscope)
49	512	26 - ATR-Organic2	D_n-ButylPhthalate	n-ButylPhthalate DuraSamplIR
50	512	34 - IRs Pharmaceuticals	LANATOSIDE C	LANATOSIDE C Formula; C <sub>49</sub> H <sub>76</sub> O <sub>20</sub> MW; 985.13  (INTERNATIONAL CHEMICAL REFERENCE SUBSTANCE) CONTROL NO.281022



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	Score	Library	Name	Comment
1	589	50 - A_FoodAdditives2	A_Powdered Cellulose-4	Powdered Cellulose (Product name; VITACEL L-600CSales origin; TOAKASEI CO., LTD.) @ DuraSamplIR2(diamond)
2	587	8 - IRs Polymer2	CELLOOPHA	Cellulose ATR/diamond ATRcorrected
3	585	43 - A_FoodAdditives2	A_Microfibrillated Cellulose_100G-4	Microfibrillated Cellulose (Product name; CELISH FD-100GCSales origin; Daicel Chemical Industries Ltd.) @ DuraSamplIR2(diamond)
4	583	42 - A_FoodAdditives2	A_Microfibrillated Cellulose_100F-4	Microfibrillated Cellulose (Product name; CELISH FD-100FCSales origin; Daicel Chemical Industries Ltd.) @ DuraSamplIR2(diamond)
5	583	41 - A_FoodAdditives2	A_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose (Product name; VIVAPUR102CSales origin; TOAKASEI CO., LTD.) @ DuraSamplIR2(diamond)
6	582	44 - A_FoodAdditives2	A_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose (Product name; CELISH FD-200LCSales origin; Daicel Chemical Industries Ltd.) @ DuraSamplIR2(diamond)

7	581	40 - A_FoodAdditives2	A_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@DuraSamplIR2(diamond)
8	575	8 - ATR-Polymer2	D_Cellulose2	Paper DuraSamplIR-II
9	571	49 - T_FoodAdditives2	T_Powdered Cellulose-4	Powdered Cellulose(P/roduct name;VITACEL L-600CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
10	569	4 - T-Organic2	Starch	Soluble Starch Transmission
11	568	43 - T_FoodAdditives2	T_Microfibrillated Cellulose_200L-4	Microfibrillated Cellulose(Product name;CELISH FD-200LCSales origin;Daicel Chemical Industries Ltd.)@KBr Wafer
12	568	42 - T_FoodAdditives2	T_Microcrystalline Cellulose_102-4	Microcrystalline Cellulose(Product name;VIVAPUR102CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
13	568	111 - ATR-Polymer2	D_Methyl_Cellulose	Methyl Cellulose(Methoxyl content 30%) DuraSamplIR-II
14	567	41 - T_FoodAdditives2	T_Microcrystalline Cellulose_101-4	Microcrystalline Cellulose(Product name;VIVAPUR101CSales origin;TOAKASEI CO.,LTD.)@KBr Wafer
15	566	11 - ATR-Polymer2	D_Cellulose4	Bemberg(Cupra) DuraSamplIR-I
16	565	184 - ATR-Polymer2	D_Methylcellulose	Methylcellulose DuraSamplIR
17	564	3 - IRs Polymer2	ARABIC	Arabic gum Film
18	564	12 - ATR-Polymer2	D_Cellulose5	Ramie DuraSamplIR-II
19	563	4 - ATR-Organic2	D_Starch	Soluble Starch DuraSamplIR
20	561	20 - T_FoodAdditives2	T_Carboxymethyl Cellulose Calcium-4	Carboxymethyl Cellulose Calcium(Product name;E.C.G-FACSales origin;Gotoku CHEMICAL CO.,LTD.)@KBr Wafer
21	560	30 - T-Organic2	Mg Stearate	Mg Stearate Transmission
22	559	100 - T-Polymer2	T_EVA-1	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 14%)
23	559	10 - ATR-Polymer2	D_Cellulose3	Cotton DuraSamplIR-II
24	557	143 - T-Polymer2	T_Tencel	Tencel(LENZING Coorporation) Transmission(Microscope)
25	556	77 - IRs Polymer2	DLTDP	DLTDP ANTIOXIDANT (CONTAINING SULFUR) DILAURYL THIODIPROPIONATE C30H58O4S CAS NO. 123-28-4 ATR/diamond ATRcorrected
26	556	101 - T-Polymer2	T_EVA-2	Ethylene/Vinyl Acetate(EVA) Copolymer(Vinyl Acetate content 18%)

27	556	42 - IRs ATR Reagent2	42	Sodium Dodecylbenzenesulfonate CH3(CH2)11C6H4SO3Na ATR/diamond molecular weight:348.48 powder
28	555	28 - ATR-Polymer2	D_Styrene-Ethylene-Butylene	Styrene-Ethylene-Butylene DuraSamplIR-II
29	555	110 - ATR-Polymer2	D_Hydroxypropyl_Methyl_Cellulose	Hydroxypropyl Methyl Cellulose(10% Hydroxypropyl, 30% Methoxyl) DuraSamplIR-II
30	554	171 - ATR-Polymer2	D_Styrene_Ethylene_Butylene2	Styrene/Ethylene-Butylene ABA Block Copolymer(Styrene content 28%) DuraSamplIR-II
31	554	96 - IRs ATR Reagent2	96	N-Methyl-2-pyrrolidone C5H9NO ATR/diamond molecular weight:99.13 liquid
32	553	108 - ATR-Polymer2	D_Hydroxybutyl_Methyl_Cellulose	Hydroxybutyl Methyl Cellulose(8% Hydroxybutyl, 20%Methoxyl) DuraSamplIR-II
33	553	185 - ATR-Polymer2	D_PVC with AdipicEster	Polyvinylchloride with Adipic Ester DuraSamplIR
34	553	106 - T-Polymer2	T_HDPE	High Density Polyethylene(HDPE)
35	552	125 - IRs ATR Reagent2	125	Tartaric Acid C2H2(OH)2(COOH)2 ATR/diamond molecular weight:150.09 powder
36	551	12 - T-Polymer2	Ramie	Ramie Transmission(Microscope)
37	551	122 - T-Polymer2	T_PE_Chlorinated-2	Polyethylene, Chlorinated(Chlorine content 36%) with KAOLIN Transmission(Microscope)
38	551	6 - T-Organic2	Glucose	D(+)-Glucose Transmission
39	550	9 - ATR-Organic2	D_EthylenebisStearamide	N,N-EthylenebisStearamide DuraSamplIR
40	549	123 - ATR-Polymer2	D_PE_PP	Ethylene/Propylene Copolymer(Ethylene content 60%) DuraSamplIR-II
41	549	122 - IRs ATR Reagent2	122	Carminic Acid C22H20O13 ATR/diamond molecular weight:492.39 powder
42	549	7 - ATR-Organic2	D_Stearamide	Stearamide DuraSamplIR
43	548	10 - ATR-Organic2	D_Paraffin	Liquid Paraffin DuraSamplIR

44	548	16 - IRs Reagent2	C18H37OH	Stearyl Alcohol [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> CH <sub>2</sub> OH;n-Octadecanol] ORIGIN Date: 92/03/05 File: C18H37OH.DX INFRARED SPECTROPHOTOMETER FTIR-8000 SERIES
45	548	51 - IRs ATR Reagent2	51	Phosphoric Acid H <sub>3</sub> PO <sub>4</sub> ATR/diamond molecular weight:98.00 liquid
46	548	82 - ATR-Polymer2	D_PCTFE	Polychloro-trifluoro-ethylene(PC TFE) DuraSamplIR-II
47	548	82 - T-Polymer2	PCTFE	Polychloro-trifluoro-ethylene(PC TFE) Transmission(Microscope)
48	546	83 - IRs Reagent2	STEA_MG	Magnesium Stearate [CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COO] <sub>2</sub> Mg ATR-Diamond ATRcorrected
49	546	8 - T-Polymer2	Paper	Paper Transmission(Microscope)
50	545	98 - ATR-Polymer2	D_Ethyl_Cellulose	EthylCellulose(Ethoxyl content 50%) DuraSamplIR-II

Respon den	Wb	f	C	R	RfD	tavg	Intake (Dt=5th)	Intake (Dt=10th)	Intake (Dt=15th)	Intake (Dt=20th)	Intake (Dt=25th)	Intake (Dt=30th)	RQ (Dt=5th)	RQ (Dt=10th)	RQ (Dt=15th)	RQ (Dt=20th)	RQ (Dt=25th)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	65	350	0.03	252	0.0004	10950	1.86E-02	3.72E-02	5.58E-02	7.44E-02	9.29E-02	1.12E-01	4.65E+01	9.29E+01	1.39E+02	1.86E+02	2.32E+02
2	73	350	0.03	252	0.0004	10950	1.66E-02	3.31E-02	4.97E-02	6.62E-02	8.28E-02	9.93E-02	4.14E+01	8.28E+01	1.24E+02	1.66E+02	2.07E+02
3	30	350	0.03	252	0.0004	10950	4.03E-02	8.05E-02	1.21E-01	1.61E-01	2.01E-01	2.42E-01	1.01E+02	2.01E+02	3.02E+02	4.03E+02	5.03E+02
4	28	350	0.03	176	0.0004	10950	3.01E-02	6.03E-02	9.04E-02	1.21E-01	1.51E-01	1.81E-01	7.53E+01	1.51E+02	2.26E+02	3.01E+02	3.77E+02
5	31	350	0.03	168	0.0004	10950	2.60E-02	5.20E-02	7.79E-02	1.04E-01	1.30E-01	1.56E-01	6.50E+01	1.30E+02	1.95E+02	2.60E+02	3.25E+02
6	66	350	0.002	260	0.0004	10950	1.26E-03	2.52E-03	3.78E-03	5.04E-03	6.30E-03	7.56E-03	3.15E+00	6.30E+00	9.44E+00	1.26E+01	1.57E+01
7	72	350	0.002	260	0.0004	10950	1.15E-03	2.31E-03	3.46E-03	4.62E-03	5.77E-03	6.93E-03	2.89E+00	5.77E+00	8.66E+00	1.15E+01	1.44E+01
8	64	350	0.002	252	0.0004	10950	1.26E-03	2.52E-03	3.78E-03	5.03E-03	6.29E-03	7.55E-03	3.15E+00	6.29E+00	9.44E+00	1.26E+01	1.57E+01
9	26	350	0.002	193	0.0004	10950	2.37E-03	4.75E-03	7.12E-03	9.49E-03	1.19E-02	1.42E-02	5.93E+00	1.19E+01	1.78E+01	2.37E+01	2.97E+01
10	29	350	0.002	176	0.0004	10950	1.94E-03	3.88E-03	5.82E-03	7.76E-03	9.70E-03	1.16E-02	4.85E+00	9.70E+00	1.45E+01	1.94E+01	2.42E+01
11	68	350	0.003	252	0.0004	10950	1.78E-03	3.55E-03	5.33E-03	7.11E-03	8.88E-03	1.07E-02	4.44E+00	8.88E+00	1.33E+01	1.78E+01	2.22E+01
12	61	350	0.003	226	0.0004	10950	1.78E-03	3.55E-03	5.33E-03	7.11E-03	8.88E-03	1.07E-02	4.44E+00	8.88E+00	1.33E+01	1.78E+01	2.22E+01
13	59	350	0.003	210	0.0004	10950	1.71E-03	3.41E-03	5.12E-03	6.83E-03	8.53E-03	1.02E-02	4.27E+00	8.53E+00	1.28E+01	1.71E+01	2.13E+01
14	27	350	0.003	168	0.0004	10950	2.98E-03	5.97E-03	8.95E-03	1.19E-02	1.49E-02	1.79E-02	7.46E+00	1.49E+01	2.24E+01	2.98E+01	3.73E+01
15	28	350	0.003	168	0.0004	10950	2.88E-03	5.75E-03	8.63E-03	1.15E-02	1.44E-02	1.73E-02	7.19E+00	1.44E+01	2.16E+01	2.88E+01	3.60E+01
16	58	350	0.001	226	0.0004	10950	6.23E-04	1.25E-03	1.87E-03	2.49E-03	3.11E-03	3.74E-03	1.56E+00	3.11E+00	4.67E+00	6.23E+00	7.78E+00
17	64	350	0.001	252	0.0004	10950	6.29E-04	1.26E-03	1.89E-03	2.52E-03	3.15E-03	3.78E-03	1.57E+00	3.15E+00	4.72E+00	6.29E+00	7.87E+00
18	67	350	0.001	218	0.0004	10950	5.20E-04	1.04E-03	1.56E-03	2.08E-03	2.60E-03	3.12E-03	1.30E+00	2.60E+00	3.90E+00	5.20E+00	6.50E+00
19	33	350	0.001	151	0.0004	10950	7.31E-04	1.46E-03	2.19E-03	2.93E-03	3.66E-03	4.39E-03	1.83E+00	3.66E+00	5.48E+00	7.31E+00	9.14E+00
20	32	350	0.001	168	0.0004	10950	8.39E-04	1.68E-03	2.52E-03	3.36E-03	4.20E-03	5.03E-03	2.10E+00	4.20E+00	6.29E+00	8.39E+00	1.05E+01
21	57	350	0.01	210	0.0004	10950	5.89E-03	1.18E-02	1.77E-02	2.36E-02	2.94E-02	3.53E-02	1.47E+01	2.94E+01	4.42E+01	5.89E+01	7.36E+01
22	69	350	0.01	210	0.0004	10950	4.86E-03	9.73E-03	1.46E-02	1.95E-02	2.43E-02	2.92E-02	1.22E+01	2.43E+01	3.65E+01	4.86E+01	6.08E+01
23	73	350	0.01	218	0.0004	10950	4.77E-03	9.55E-03	1.43E-02	1.91E-02	2.39E-02	2.86E-02	1.19E+01	2.39E+01	3.58E+01	4.77E+01	5.97E+01
24	27	350	0.01	168	0.0004	10950	9.94E-03	1.99E-02	2.98E-02	3.98E-02	4.97E-02	5.97E-02	2.49E+01	4.97E+01	7.46E+01	9.94E+01	1.24E+02
25	28	350	0.01	168	0.0004	10950	9.59E-03	1.92E-02	2.88E-02	3.84E-02	4.79E-02	5.75E-02	2.40E+01	4.79E+01	7.19E+01	9.59E+01	1.20E+02
26	68	350	0.003	193	0.0004	10950	1.36E-03	2.72E-03	4.08E-03	5.44E-03	6.80E-03	8.16E-03	3.40E+00	6.80E+00	1.02E+01	1.36E+01	1.70E+01
27	66	350	0.003	202	0.0004	10950	1.47E-03	2.93E-03	4.40E-03	5.87E-03	7.34E-03	8.80E-03	3.67E+00	7.34E+00	1.10E+01	1.47E+01	1.83E+01
28	65	350	0.003	235	0.0004	10950	1.73E-03	3.47E-03	5.20E-03	6.93E-03	8.67E-03	1.04E-02	4.33E+00	8.67E+00	1.30E+01	1.73E+01	2.17E+01
29	33	350	0.003	168	0.0004	10950	2.44E-03	4.88E-03	7.32E-03	9.76E-03	1.22E-02	1.46E-02	6.10E+00	1.22E+01	1.83E+01	2.44E+01	3.05E+01
30	32	350	0.003	168	0.0004	10950	2.52E-03	5.03E-03	7.55E-03	1.01E-02	1.26E-02	1.51E-02	6.29E+00	1.26E+01	1.89E+01	2.52E+01	3.15E+01
31	67	350	0.011	252	0.0004	10950	6.61E-03	1.32E-02	1.98E-02	2.64E-02	3.31E-02	3.97E-02	1.65E+01	3.31E+01	4.96E+01	6.61E+01	8.27E+01
32	68	350	0.011	235	0.0004	10950	6.08E-03	1.22E-02	1.82E-02	2.43E-02	3.04E-02	3.65E-02	1.52E+01	3.04E+01	4.56E+01	6.08E+01	7.59E+01

33	68	350	0.011	244	0.0004	10950	6.31E-03	1.26E-02	1.89E-02	2.52E-02	3.15E-02	3.78E-02	1.58E+01	3.15E+01	4.73E+01	6.31E+01	7.89E+01
34	31	350	0.011	168	0.0004	10950	9.53E-03	1.91E-02	2.86E-02	3.81E-02	4.76E-02	5.72E-02	2.38E+01	4.76E+01	7.15E+01	9.53E+01	1.19E+02
35	30	350	0.011	193	0.0004	10950	1.13E-02	2.26E-02	3.39E-02	4.52E-02	5.65E-02	6.79E-02	2.83E+01	5.65E+01	8.48E+01	1.13E+02	1.41E+02
36	68	350	0.006	210	0.0004	10950	2.96E-03	5.92E-03	8.88E-03	1.18E-02	1.48E-02	1.78E-02	7.40E+00	1.48E+01	2.22E+01	2.96E+01	3.70E+01
37	69	350	0.006	218	0.0004	10950	3.03E-03	6.06E-03	9.09E-03	1.21E-02	1.51E-02	1.82E-02	7.57E+00	1.51E+01	2.27E+01	3.03E+01	3.79E+01
38	58	350	0.006	245	0.0004	10950	4.05E-03	8.10E-03	1.22E-02	1.62E-02	2.03E-02	2.43E-02	1.01E+01	2.03E+01	3.04E+01	4.05E+01	5.06E+01
39	26	350	0.006	189	0.0004	10950	6.97E-03	1.39E-02	2.09E-02	2.79E-02	3.49E-02	4.18E-02	1.74E+01	3.49E+01	5.23E+01	6.97E+01	8.71E+01
40	27	350	0.006	168	0.0004	10950	5.97E-03	1.19E-02	1.79E-02	2.39E-02	2.98E-02	3.58E-02	1.49E+01	2.98E+01	4.47E+01	5.97E+01	7.46E+01
41	69	350	0.009	252	0.0004	10950	5.25E-03	1.05E-02	1.58E-02	2.10E-02	2.63E-02	3.15E-02	1.31E+01	2.63E+01	3.94E+01	5.25E+01	6.57E+01
42	68	350	0.009	252	0.0004	10950	5.33E-03	1.07E-02	1.60E-02	2.13E-02	2.67E-02	3.20E-02	1.33E+01	2.67E+01	4.00E+01	5.33E+01	6.66E+01
43	32	350	0.009	235	0.0004	10950	1.06E-02	2.11E-02	3.17E-02	4.23E-02	5.28E-02	6.34E-02	2.64E+01	5.28E+01	7.92E+01	1.06E+02	1.32E+02
44	29	350	0.009	168	0.0004	10950	8.33E-03	1.67E-02	2.50E-02	3.33E-02	4.17E-02	5.00E-02	2.08E+01	4.17E+01	6.25E+01	8.33E+01	1.04E+02
45	29	350	0.009	168	0.0004	10950	8.33E-03	1.67E-02	2.50E-02	3.33E-02	4.17E-02	5.00E-02	2.08E+01	4.17E+01	6.25E+01	8.33E+01	1.04E+02
46	68	350	0.003	269	0.0004	10950	1.90E-03	3.79E-03	5.69E-03	7.59E-03	9.48E-03	1.14E-02	4.74E+00	9.48E+00	1.42E+01	1.90E+01	2.37E+01
47	69	350	0.003	252	0.0004	10950	1.75E-03	3.50E-03	5.25E-03	7.00E-03	8.76E-03	1.05E-02	4.38E+00	8.76E+00	1.31E+01	1.75E+01	2.19E+01
48	68	350	0.003	252	0.0004	10950	1.78E-03	3.55E-03	5.33E-03	7.11E-03	8.88E-03	1.07E-02	4.44E+00	8.88E+00	1.33E+01	1.78E+01	2.22E+01
49	33	350	0.003	168	0.0004	10950	2.44E-03	4.88E-03	7.32E-03	9.76E-03	1.22E-02	1.46E-02	6.10E+00	1.22E+01	1.83E+01	2.44E+01	3.05E+01
50	32	350	0.003	143	0.0004	10950	2.14E-03	4.29E-03	6.43E-03	8.57E-03	1.07E-02	1.29E-02	5.36E+00	1.07E+01	1.61E+01	2.14E+01	2.68E+01
51	63	350	0.004	235	0.0004	10950	2.38E-03	4.77E-03	7.15E-03	9.54E-03	1.19E-02	1.43E-02	5.96E+00	1.19E+01	1.79E+01	2.38E+01	2.98E+01
52	67	350	0.004	252	0.0004	10950	2.40E-03	4.81E-03	7.21E-03	9.62E-03	1.20E-02	1.44E-02	6.01E+00	1.20E+01	1.80E+01	2.40E+01	3.01E+01
53	67	350	0.004	252	0.0004	10950	2.40E-03	4.81E-03	7.21E-03	9.62E-03	1.20E-02	1.44E-02	6.01E+00	1.20E+01	1.80E+01	2.40E+01	3.01E+01
54	32	350	0.004	168	0.0004	10950	3.36E-03	6.71E-03	1.01E-02	1.34E-02	1.68E-02	2.01E-02	8.39E+00	1.68E+01	2.52E+01	3.36E+01	4.20E+01
55	30	350	0.004	168	0.0004	10950	3.58E-03	7.16E-03	1.07E-02	1.43E-02	1.79E-02	2.15E-02	8.95E+00	1.79E+01	2.68E+01	3.58E+01	4.47E+01
56	66	350	0.004	227	0.0004	10950	2.20E-03	4.40E-03	6.60E-03	8.79E-03	1.10E-02	1.32E-02	5.50E+00	1.10E+01	1.65E+01	2.20E+01	2.75E+01
57	71	350	0.004	235	0.0004	10950	2.12E-03	4.23E-03	6.35E-03	8.46E-03	1.06E-02	1.27E-02	5.29E+00	1.06E+01	1.59E+01	2.12E+01	2.64E+01
58	72	350	0.004	218	0.0004	10950	1.94E-03	3.87E-03	5.81E-03	7.74E-03	9.68E-03	1.16E-02	4.84E+00	9.68E+00	1.45E+01	1.94E+01	2.42E+01
59	32	350	0.004	160	0.0004	10950	3.20E-03	6.39E-03	9.59E-03	1.28E-02	1.60E-02	1.92E-02	7.99E+00	1.60E+01	2.40E+01	3.20E+01	4.00E+01
60	28	350	0.004	176	0.0004	10950	4.02E-03	8.04E-03	1.21E-02	1.61E-02	2.01E-02	2.41E-02	1.00E+01	2.01E+01	3.01E+01	4.02E+01	5.02E+01
61	60	350	0.004	252	0.0004	10950	2.68E-03	5.37E-03	8.05E-03	1.07E-02	1.34E-02	1.61E-02	6.71E+00	1.34E+01	2.01E+01	2.68E+01	3.36E+01
62	63	350	0.004	252	0.0004	10950	2.56E-03	5.11E-03	7.67E-03	1.02E-02	1.28E-02	1.53E-02	6.39E+00	1.28E+01	1.92E+01	2.56E+01	3.20E+01
63	33	350	0.004	168	0.0004	10950	3.25E-03	6.51E-03	9.76E-03	1.30E-02	1.63E-02	1.95E-02	8.14E+00	1.63E+01	2.44E+01	3.25E+01	4.07E+01
64	32	350	0.004	168	0.0004	10950	3.36E-03	6.71E-03	1.01E-02	1.34E-02	1.68E-02	2.01E-02	8.39E+00	1.68E+01	2.52E+01	3.36E+01	4.20E+01
65	29	350	0.004	168	0.0004	10950	3.70E-03	7.41E-03	1.11E-02	1.48E-02	1.85E-02	2.22E-02	9.26E+00	1.85E+01	2.78E+01	3.70E+01	4.63E+01
66	59	350	0.001	227	0.0004	10950	6.15E-04	1.23E-03	1.84E-03	2.46E-03	3.07E-03	3.69E-03	1.54E+00	3.07E+00	4.61E+00	6.15E+00	7.69E+00

67	56	350	0.001	218	0.0004	10950	6.22E-04	1.24E-03	1.87E-03	2.49E-03	3.11E-03	3.73E-03	1.56E+00	3.11E+00	4.67E+00	6.22E+00	7.78E+00
68	45	350	0.001	210	0.0004	10950	7.46E-04	1.49E-03	2.24E-03	2.98E-03	3.73E-03	4.47E-03	1.86E+00	3.73E+00	5.59E+00	7.46E+00	9.32E+00
69	24	350	0.001	160	0.0004	10950	1.07E-03	2.13E-03	3.20E-03	4.26E-03	5.33E-03	6.39E-03	2.66E+00	5.33E+00	7.99E+00	1.07E+01	1.33E+01
70	21	350	0.001	142	0.0004	10950	1.08E-03	2.16E-03	3.24E-03	4.32E-03	5.40E-03	6.48E-03	2.70E+00	5.40E+00	8.11E+00	1.08E+01	1.35E+01
71	62	350	0.004	252	0.0004	10950	2.60E-03	5.20E-03	7.79E-03	1.04E-02	1.30E-02	1.56E-02	6.50E+00	1.30E+01	1.95E+01	2.60E+01	3.25E+01
72	63	350	0.004	235	0.0004	10950	2.38E-03	4.77E-03	7.15E-03	9.54E-03	1.19E-02	1.43E-02	5.96E+00	1.19E+01	1.79E+01	2.38E+01	2.98E+01
73	61	350	0.004	210	0.0004	10950	2.20E-03	4.40E-03	6.60E-03	8.80E-03	1.10E-02	1.32E-02	5.50E+00	1.10E+01	1.65E+01	2.20E+01	2.75E+01
74	24	350	0.004	126	0.0004	10950	3.36E-03	6.71E-03	1.01E-02	1.34E-02	1.68E-02	2.01E-02	8.39E+00	1.68E+01	2.52E+01	3.36E+01	4.20E+01
75	26	350	0.004	126	0.0004	10950	3.10E-03	6.20E-03	9.29E-03	1.24E-02	1.55E-02	1.86E-02	7.74E+00	1.55E+01	2.32E+01	3.10E+01	3.87E+01
76	66	350	0.003	252	0.0004	10950	1.83E-03	3.66E-03	5.49E-03	7.32E-03	9.15E-03	1.10E-02	4.58E+00	9.15E+00	1.37E+01	1.83E+01	2.29E+01
77	63	350	0.003	202	0.0004	10950	1.54E-03	3.07E-03	4.61E-03	6.15E-03	7.69E-03	9.22E-03	3.84E+00	7.69E+00	1.15E+01	1.54E+01	1.92E+01
78	63	350	0.003	218	0.0004	10950	1.66E-03	3.32E-03	4.98E-03	6.64E-03	8.30E-03	9.95E-03	4.15E+00	8.30E+00	1.24E+01	1.66E+01	2.07E+01
79	27	350	0.003	168	0.0004	10950	2.98E-03	5.97E-03	8.95E-03	1.19E-02	1.49E-02	1.79E-02	7.46E+00	1.49E+01	2.24E+01	2.98E+01	3.73E+01
80	23	350	0.003	134	0.0004	10950	2.79E-03	5.59E-03	8.38E-03	1.12E-02	1.40E-02	1.68E-02	6.98E+00	1.40E+01	2.09E+01	2.79E+01	3.49E+01
81	61	350	0.002	218	0.0004	10950	1.14E-03	2.28E-03	3.43E-03	4.57E-03	5.71E-03	6.85E-03	2.86E+00	5.71E+00	8.57E+00	1.14E+01	1.43E+01
82	62	350	0.002	252	0.0004	10950	1.30E-03	2.60E-03	3.90E-03	5.20E-03	6.50E-03	7.79E-03	3.25E+00	6.50E+00	9.74E+00	1.30E+01	1.62E+01
83	53	350	0.002	210	0.0004	10950	1.27E-03	2.53E-03	3.80E-03	5.07E-03	6.33E-03	7.60E-03	3.17E+00	6.33E+00	9.50E+00	1.27E+01	1.58E+01
84	24	350	0.002	151	0.0004	10950	2.01E-03	4.02E-03	6.03E-03	8.04E-03	1.01E-02	1.21E-02	5.03E+00	1.01E+01	1.51E+01	2.01E+01	2.51E+01
85	23	350	0.002	143	0.0004	10950	1.99E-03	3.97E-03	5.96E-03	7.95E-03	9.94E-03	1.19E-02	4.97E+00	9.94E+00	1.49E+01	1.99E+01	2.48E+01
86	60	350	0.002	252	0.0004	10950	1.34E-03	2.68E-03	4.03E-03	5.37E-03	6.71E-03	8.05E-03	3.36E+00	6.71E+00	1.01E+01	1.34E+01	1.68E+01
87	69	350	0.002	235	0.0004	10950	1.09E-03	2.18E-03	3.27E-03	4.35E-03	5.44E-03	6.53E-03	2.72E+00	5.44E+00	8.16E+00	1.09E+01	1.36E+01
88	54	350	0.002	202	0.0004	10950	1.20E-03	2.39E-03	3.59E-03	4.78E-03	5.98E-03	7.17E-03	2.99E+00	5.98E+00	8.97E+00	1.20E+01	1.49E+01
89	33	350	0.002	176	0.0004	10950	1.70E-03	3.41E-03	5.11E-03	6.82E-03	8.52E-03	1.02E-02	4.26E+00	8.52E+00	1.28E+01	1.70E+01	2.13E+01
90	32	350	0.002	176	0.0004	10950	1.76E-03	3.52E-03	5.27E-03	7.03E-03	8.79E-03	1.05E-02	4.39E+00	8.79E+00	1.32E+01	1.76E+01	2.20E+01
91	58	350	0.001	202	0.0004	10950	5.57E-04	1.11E-03	1.67E-03	2.23E-03	2.78E-03	3.34E-03	1.39E+00	2.78E+00	4.17E+00	5.57E+00	6.96E+00
92	57	350	0.001	210	0.0004	10950	5.89E-04	1.18E-03	1.77E-03	2.36E-03	2.94E-03	3.53E-03	1.47E+00	2.94E+00	4.42E+00	5.89E+00	7.36E+00
93	59	350	0.001	252	0.0004	10950	6.83E-04	1.37E-03	2.05E-03	2.73E-03	3.41E-03	4.10E-03	1.71E+00	3.41E+00	5.12E+00	6.83E+00	8.53E+00
94	26	350	0.001	168	0.0004	10950	1.03E-03	2.07E-03	3.10E-03	4.13E-03	5.16E-03	6.20E-03	2.58E+00	5.16E+00	7.74E+00	1.03E+01	1.29E+01
95	26	350	0.001	168	0.0004	10950	1.03E-03	2.07E-03	3.10E-03	4.13E-03	5.16E-03	6.20E-03	2.58E+00	5.16E+00	7.74E+00	1.03E+01	1.29E+01
96	71	350	0.001	193	0.0004	10950	4.34E-04	8.69E-04	1.30E-03	1.74E-03	2.17E-03	2.61E-03	1.09E+00	2.17E+00	3.26E+00	4.34E+00	5.43E+00
97	64	350	0.001	244	0.0004	10950	6.09E-04	1.22E-03	1.83E-03	2.44E-03	3.05E-03	3.66E-03	1.52E+00	3.05E+00	4.57E+00	6.09E+00	7.62E+00
98	32	350	0.001	227	0.0004	10950	1.13E-03	2.27E-03	3.40E-03	4.53E-03	5.67E-03	6.80E-03	2.83E+00	5.67E+00	8.50E+00	1.13E+01	1.42E+01
99	33	350	0.001	134	0.0004	10950	6.49E-04	1.30E-03	1.95E-03	2.60E-03	3.24E-03	3.89E-03	1.62E+00	3.24E+00	4.87E+00	6.49E+00	8.11E+00

100	28	350	0.001	126	0.0004	10950	7.19E-04	1.44E-03	2.16E-03	2.88E-03	3.60E-03	4.32E-03	1.80E+00	3.60E+00	5.39E+00	7.19E+00	8.99E+00
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RQ (Dt=30th)	Interpretasi RQ (5 tahun)	Interpretasi RQ (10 tahun)	Interpretasi RQ (15 tahun)	Interpretasi RQ (20 tahun)	Interpretasi RQ (25 tahun)	Interpretasi RQ (30 tahun)	Risk Manajemen (Dt)	Risk Manajemen (R)	Risk Manajemen (RfD)
19	20	21	22	23	24	25	26	27	28
2.79E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	837018000	99645000	13372476.92
2.48E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	940035600	111909000	11907000
6.04E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	386316000	45990000	28973700
4.52E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	251820800	42924000	21681000
3.90E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	266128800	47523000	18692709.68
1.89E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	13153140000	1517670000	905863.6364
1.73E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	14348880000	1655640000	830375
1.89E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	12362112000	1471680000	905428.125
3.56E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	3846297000	597870000	1706936.538
2.91E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	3912216000	666855000	1395558.621
2.67E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8756496000	1042440000	1278251.471
2.66E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	7044646000	935130000	1277918.852
2.56E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6331290000	904470000	1227699.153
4.47E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2317896000	413910000	2146200
4.32E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2403744000	429240000	2069550
9.34E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	20094564000	2667420000	448006.0345
9.44E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	24724224000	2943360000	452714.0625
7.80E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	22390998000	3081330000	374097.7612
1.10E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	7638939000	1517670000	526097.7273
1.26E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8241408000	1471680000	603618.75
8.83E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1835001000	262143000	4235921.053
7.30E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2221317000	317331000	3499239.13
7.16E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2439616200	335727000	3433500
1.49E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	695368800	124173000	7154000
1.44E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	721123200	128772000	6898500
2.04E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6706364000	1042440000	978978.3088
2.20E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6812652000	1011780000	1055679.545
2.60E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	7805525000	996450000	1247036.538
3.66E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2832984000	505890000	1755981.818
3.78E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2747136000	490560000	1810856.25
9.92E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2353015636	280120909.1	4756876.119
9.11E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2227030909	284301818.2	4370740.809

9.46E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2312321455	284301818.2	4538130.882
1.43E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	725805818.2	129608181.8	6853993.548
1.70E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	806915454.5	125427272.7	8136397.5
4.44E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	3648540000	521220000	2130419.118
4.54E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	3843231000	528885000	2179526.087
6.08E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	3630655000	444570000	2914021.552
1.05E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1255527000	199290000	5014678.846
8.95E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1158948000	206955000	4292400
7.88E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2961756000	352590000	3779178.261
8.00E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2918832000	347480000	3834754.412
1.58E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1280906667	163520000	7599128.906
1.25E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	829864000	148190000	5994558.621
1.25E+02	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	829864000	148190000	5994558.621
2.84E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	9347212000	1042440000	1364482.721
2.63E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8885268000	1057770000	1259726.087
2.67E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8756496000	1042440000	1278251.471
3.66E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2832984000	505890000	1755981.818
3.21E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2338336000	490560000	1541383.594
3.58E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5674016250	724342500	1715500
3.61E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6470793000	770332500	1729773.134
3.61E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6470793000	770332500	1729773.134
5.03E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2060352000	367920000	2414475
5.37E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1931580000	344925000	2575440
3.30E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5741851500	758835000	1581777.273
3.17E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6394526250	816322500	1522204.225
2.90E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6015492000	827820000	1392475
4.79E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1962240000	367920000	2299500
6.03E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1888656000	321930000	2890800
4.03E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5794740000	689850000	1931580
3.84E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6084477000	724342500	1839600
4.88E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2124738000	379417500	2341309.091
5.03E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2060352000	367920000	2414475
5.56E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1867194000	333427500	2664248.276
9.22E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	20531469000	2713410000	442361.4407

9.33E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	18714864000	2575440000	447581.25
1.12E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	14486850000	2069550000	536550
1.60E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5886720000	1103760000	766500
1.62E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	4571406000	965790000	777450
3.90E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5987898000	712845000	1869270.968
3.58E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5674016250	724342500	1715500
3.30E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	4909432500	701347500	1583262.295
5.03E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1158948000	275940000	2414475
4.65E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1255527000	298935000	2228746.154
2.75E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8498952000	1011780000	1316986.364
2.31E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6502986000	965790000	1105950
2.49E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	7018074000	965790000	1193550
4.47E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2317896000	413910000	2146200
4.19E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	1574902000	352590000	2009563.043
1.71E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	10192917000	1402695000	821788.5246
1.95E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	11975796000	1425690000	934635.4839
1.90E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8531145000	1218735000	911122.6415
3.02E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2777796000	551880000	1446768.75
2.98E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	2521018500	528885000	1429689.13
2.01E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	11589480000	1379700000	965790
1.63E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	12428797500	1586655000	783163.0435
1.79E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	8360982000	1241730000	860183.3333
2.56E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	4451832000	758835000	1226400
2.64E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	4316928000	735840000	1264725
8.35E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	17960628000	2667420000	400430.1724
8.83E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	18350010000	2621430000	423592.1053
1.02E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	22792644000	2713410000	491079.661
1.55E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6696144000	1195740000	742915.3846
1.55E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6696144000	1195740000	742915.3846
6.52E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	21006699000	3265290000	312537.6761
9.14E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	23939328000	2943360000	438342.1875
1.70E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	11135712000	1471680000	815603.9063
9.73E+00	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	6778926000	1517670000	466868.1818

1.08E+01	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	BERISIKO	5408424000	1287720000	517387.5
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FREQUENCIES VARIABLES=BERAT\_BADAN FREKUENSI\_PAJANAN KONSENTRASI\_PET LAJU\_ASUPAN DURASI\_PAJANAN  
 /STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN MODE SUM  
 /ORDER=ANALYSIS.

### Frequencies

		Statistics						
		BERAT_BADAN	JANAN	KONSENTRASI_PET	LAJU_ASUPAN	DURASI_PAJANAN	USIA	JENIS_KELAMIN
N	Valid	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0
Mean		48.61	350.00	.01	204.19	30.00	34.74	1.42
Median		57.50	350.00	.00	210.00	30.00	50.00	1.00
Mode		32	350	0 <sup>a</sup>	168	30	9	1
Minimum		21	350	0	126	30	7	1
Maximum		73	350	0	269	30	68	2
Sum		4861	35000	1	20419	3000	3474	142

a. Multiple modes exist. The smallest value is shown

### Frequency Table

BERAT_BADAN					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	21	1	1.0	1.0	1.0
	23	2	2.0	2.0	3.0
	24	3	3.0	3.0	6.0
	26	5	5.0	5.0	11.0
	27	4	4.0	4.0	15.0
	28	5	5.0	5.0	20.0
	29	4	4.0	4.0	24.0
	30	3	3.0	3.0	27.0
	31	2	2.0	2.0	29.0
	32	9	9.0	9.0	38.0
	33	6	6.0	6.0	44.0
	45	1	1.0	1.0	45.0
	53	1	1.0	1.0	46.0
	54	1	1.0	1.0	47.0
	56	1	1.0	1.0	48.0
	57	2	2.0	2.0	50.0
	58	3	3.0	3.0	53.0
	59	3	3.0	3.0	56.0
	60	2	2.0	2.0	58.0
	61	3	3.0	3.0	61.0
	62	2	2.0	2.0	63.0
	63	5	5.0	5.0	68.0
	64	3	3.0	3.0	71.0
	65	2	2.0	2.0	73.0
	66	4	4.0	4.0	77.0
	67	4	4.0	4.0	81.0
	68	8	8.0	8.0	89.0

69	5	5.0	5.0	94.0
71	2	2.0	2.0	96.0
72	2	2.0	2.0	98.0
73	2	2.0	2.0	100.0
Total	100	100.0	100.0	

### FREKUENSI\_PAJANAN

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	350	100	100.0	100.0

### KONSENTRASI\_PET

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	20.0	20.0
	0	15	15.0	35.0
	0	20	20.0	55.0
	0	20	20.0	75.0
	0	5	5.0	80.0
	0	5	5.0	85.0
	0	5	5.0	90.0
	0	5	5.0	95.0
	0	5	5.0	100.0
Total	100	100.0	100.0	

### LAJU\_ASUPAN

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	126	3	3.0	3.0
	134	2	2.0	5.0
	142	1	1.0	6.0
	143	2	2.0	8.0
	151	2	2.0	10.0
	160	2	2.0	12.0
	168	21	21.0	33.0
	176	5	5.0	38.0
	189	1	1.0	39.0
	193	4	4.0	43.0
	202	4	4.0	47.0
	210	8	8.0	55.0
	218	7	7.0	62.0
	226	2	2.0	64.0
	227	3	3.0	67.0
	235	7	7.0	74.0
	244	2	2.0	76.0
	245	1	1.0	77.0

252	20	20.0	20.0	97.0
260	2	2.0	2.0	99.0
269	1	1.0	1.0	100.0
Total	100	100.0	100.0	

### DURASI\_PAJANAN

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30	100	100.0	100.0

FREQUENCIES VARIABLES=BERAT\_BADAN FREKUENSI\_PAJANAN KONSENTRASI\_PET LAJU\_ASUPAN DURASI\_PAJANAN USIA JENIS\_KELAMIN  
/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN MODE SUM  
/ORDER=ANALYSIS.

### USIA

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	6	6.0	6.0
	8	4	4.0	10.0
	9	12	12.0	22.0
	10	9	9.0	31.0
	11	9	9.0	40.0
	12	3	3.0	43.0
	42	1	1.0	44.0
	45	4	4.0	48.0
	49	1	1.0	49.0
	50	4	4.0	53.0
	51	7	7.0	60.0
	52	8	8.0	68.0
	53	4	4.0	72.0
	55	6	6.0	78.0
	56	5	5.0	83.0
	57	5	5.0	88.0
	58	5	5.0	93.0
	59	3	3.0	96.0
	60	2	2.0	98.0
	61	1	1.0	99.0
	68	1	1.0	100.0
Total	100	100.0	100.0	

### JENIS\_KELAMIN

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	LAKI-LAKI	58	58.0	58.0
	PEREMPUAN	42	42.0	100.0

Total	100	100.0	100.0
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### PENDIDIKAN\_TERAKHIR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	43	43.0	43.0	43.0
	SMP	5	5.0	5.0	48.0
	SMA	25	25.0	25.0	73.0
	Perguruan tinggi	27	27.0	27.0	100.0
	Total	100	100.0	100.0	

### PEKERJAAN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Belum Bekerja	43	43.0	43.0	43.0
	IRT	15	15.0	15.0	58.0
	PNS	20	20.0	20.0	78.0
	WIRASWASTA	22	22.0	22.0	100.0
	Total	100	100.0	100.0	

```
FREQUENCIES VARIABLES=INTAKE_5_TAHUN INTAKE_10_TAHUN INTAKE_15_TAHUN INTAKE_20_TAHUN
INTAKE_25_TAHUN INTAKE_30_TAHUN
/NTILES=4
/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN MODE SUM
/BARCHART FREQ
/ORDER=ANALYSIS.
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### Frequencies

		Statistics					
		INTAKE_5_TA HUN	INTAKE_10_TA HUN	INTAKE_15_TA HUN	INTAKE_20_TA HUN	INTAKE_25_TA HUN	INTAKE_30_TA HUN
N	Valid	100	100	100	100	100	100
		0	0	0	0	0	0
Mean		.0040	.0081	.0121	.0161	.0202	.0242
Median		.0022	.0044	.0066	.0088	.0110	.0132
Mode		.00	.01	.01	.01	.02	.02
Minimum		.00	.00	.00	.00	.00	.00
Maximum		.04	.08	.12	.16	.20	.24
Sum		.40	.81	1.21	1.61	2.02	2.42
Percentiles		.0013	.0025	.0038	.0050	.0063	.0076
		.0022	.0044	.0066	.0088	.0110	.0132
		.0037	.0073	.0110	.0147	.0184	.0220

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FREQUENCIES VARIABLES=RQ_5_TAHUN RQ_10_TAHUN RQ_15_TAHUN RQ_20_TAHUN RQ_25_TAHUN RQ_30_TAHUN
/NTILES=4
/STATISTICS=MINIMUM MAXIMUM MEAN MEDIAN MODE SUM
/BARCHART FREQ
/ORDER=ANALYSIS.
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## Frequencies

		Statistics					
		RQ_5_TAHUN	RQ_10_TAHUN	RQ_15_TAHUN	RQ_20_TAHUN	RQ_25_TAHUN	RQ_30_TAHUN
N	Valid	100	100	100	100	100	100
	Missing	0	0	0	0	0	0
Mean		10.0786	20.1571	30.2357	40.3143	50.3928	60.4714
Median		5.4993	10.9987	16.4980	21.9973	27.4966	32.9960
Mode		8.39	16.78	25.17	33.56	41.95	50.34
Minimum		1.09	2.17	3.26	4.34	5.43	6.52
Maximum		100.68	201.37	302.05	402.74	503.42	604.11
Sum		1007.86	2015.71	3023.57	4031.43	5039.28	6047.14
Percentiles	25	3.1468	6.2936	9.4403	12.5871	15.7339	18.8807
	50	5.4993	10.9987	16.4980	21.9973	27.4966	32.9960
	75	9.1812	18.3625	27.5437	36.7249	45.9062	55.0874

```

FREQUENCIES VARIABLES=RISK_MANAJEMEN_Dt RISK_MANAJEMEN_LAJU_ASUPAN RISK_MANAJEMEN_REFERENCE_DOSIS
/NTILES=4
/STATISTICS=STDDEV MINIMUM MAXIMUM SEMEAN MEAN MEDIAN MODE SUM
/ORDER=ANALYSIS.

```

## Frequencies

		Statistics		
		RISK_MANAJEME	RISK_MANAJEME	RISK_MANAJE
		N_Dt	N_LAJU_ASUPAN	MEN_REFERE
N	Valid	100	100	100
	Missing	0	0	0
Mean		6475518580.8970	913103345.0000	2900268.9866
Std. Error of Mean		599103802.08536	78047660.11797	430430.07720
Median		5158928250.0000	724342500.0000	1582519.7840
Mode		829864000.00 <sup>a</sup>	1042440000.00	2414475.00
Std. Deviation		5991038020.85360	780476601.17965	4304300.77203
Minimum		251820800.00	42924000.00	312537.68
Maximum		24724224000.00	3265290000.00	28973700.00
Sum		647551858089.70	91310334500.00	290026898.66
Percentiles	25	2148882750.0000	345563750.0000	905537.0029
	50	5158928250.0000	724342500.0000	1582519.7840
	75	8464459500.0000	1212986250.0000	2642046.2070

a. Multiple modes exist. The smallest value is shown



## Lampiran 11



