DAFTAR PUSTAKA

Aliman, R., Atiq, A., Haetami, M., Yunitaningrum, W., & Azazi. (2023). Tingkat Vo2 Max (Volume Oksigen Maximal) Atlet Sepak Takraw. *Jurnal Dunia Pendidikan*, *4*(1), 694–702.

Alwi, I. (2015). Kriteria Empirik Dalam Menentukan Ukuran Sampel Pada Pengujian Hipotesis Statistika Dan Analisis Butir. *Jurnal Formatif*, *2*(2), 140–148.

Chen, A., Zhu, J., Lin, Q., & Liu, W. (2022). A Comparative Study of Forehead Temperature and Core Body Temperature Under Varying Ambient Temperature Conditions. *International Journal of Environmental Research and Public Health*, *19*(23).

Erawan, I. K. A., Mahardiananta, I., & Dharmayanti, C. I. (2020). Rancang Bangun Termometer Real Time Berbasis *Internet of Things* (Doctoral Dissertation, Universitas Bali Internasional).

Faghy, M., Blacker, S., & Brown, P. I. (2016). Effects Of Load Mass Carried in A Backpack Upon Respiratory Muscle Fatigue. *European Journal of Sport Science*, *16*(8), 1032–1038.

Fenemor, S. P., Gill, N. D., Sims, S. T., Beaven, C. M., & Driller, M. W. (2020). Validity of A Tympanic Thermometer and Thermal Imaging Camera for Measuring Core and Skin Temperature During Exercise In The Heat. *Measurement In Physical Education and Exercise Science*, *24*(1), 49-55.

Gasim, G. I., Musa, I. R., Abdien, M. T., & Adam, I. (2013). Accuracy of Tympanic Temperature Measurement Using An Infrared Tympanic Membrane Thermometer. *Bmc Research Notes*, *6*, 1-5.

Graha, A. S. (2010). Adaptasi Suhu Tubuh Terhadap Latihan Dan Efek Cedera Di Cuaca Panas Dan Dingin. *Jurnal Olahraga Prestasi*, *6*(2).

Handayani, G., Lintong, F., & Rumampuk, J. F. (2016). Pengaruh Aktivitas Berlari Terhadap Tekanan Darah Dan Suhu Pada Pria Dewasa Normal. *Ebiomedik*, *4*(1).

Huang, C., Que, J., Liu, Q., & Zhang, Y. (2021). On The Gym Air Temperature Supporting Exercise and Comfort. *Building And Environment*, *206*. Https://Doi.Org/10.1016/J.Buildenv.2021.108313

Huang, J. K., Huang, S. Y., Lee, C. H., Yang, I. F., Yang, T. F., & Wang, Y. M. (2023). Effect of Age on Heart Rate Variability in Patients With Mitral Valve Prolapse: An Observational Study. *Journal Of Clinical Medicine*, *12*(1).

Hymczak, H., Gołąb, A., Mendrala, K., Plicner, D., Darocha, T., Podsiadło, P., Hudziak, D., Gocoł, R., & Kosiński, S. (2021). Core Temperature Measurement—Principles of Correct Measurement, Problems, and Complications. *International Journal of Environmental Research And Public Health*, *18*(20).

Ismunarti, D. H., Zainuri, M., Sugianto, D. N., & Saputra, S. W. (2020). Pengujian Reliabilitas Instrumen Terhadap Variabel Kontinu Untuk Pengukuran Konsentrasi Klorofil- A Perairan. *Buletin Oseanografi Marina*, *9*(1), 1–8.

Jensen-Urstad, K., Storck, N., Bouvier, F., Ericson, M., Lindblad, L. E., & Jensen-Urstad, M. (1997). Heart Rate Variability in Healthy Subjects is Related to Age and Gender. *Acta Physiologica Scandinavica*, *160*(3), 235–241.

Kakitsuba, N. (2019). Effect of Change in Ambient Temperature on Core Temperature of Female Subjects During The Daytime and Its Sex Differences. *International Journal of Biometeorology*, *63*(8), 1069-1076.

Leduc, D., Woods, S., & Community Paediatrics Commitee. (2000). Temperature Measurement in Paediatrics. *Paediatr Child Health*, *5*, 273–276.

Lee, J. Y., Nakao, K., Takahashi, N., Son, S. Y., Bakri, I., & Tochihara, Y. (2011). Validity of Infrared Tympanic Temperature for The Evaluation of Heat Strain While Wearing Impermeable Protective Clothing in Hot Environments. *Industrial Health*, *49*(6), 714-725.

Man, H. E. (2023). Comparing The Accuracy of Temperature Measurement Between Infrared Forehead Thermometer and Tympanic Thermometer. *Journal Of Survey in Fisheries Sciences*, *10*(4s), 587-597.

Mayzarah, D. A., Yusuf, R. A., Sani, A., Andayanie, E., & Hardi, I. (2023). Pengaruh Gaya Hidup Sehat Terhadap Produktivitas Pegawai Kantor Badan Pengelolaan Keuangan Daerah Luwu. *Window Of Public Health Journal*, *4*(3), 439–448.

Mckenna, Z. J., Foster, J., Atkins, W. C., Belval, L. N., Watso, J. C., Jarrard, C. P., ... & Crandall, C. G. (2023). Age Alters The Thermoregulatory Responses to Extreme Heat Exposure With Accompanying Activities Of Daily Living. *Journal of Applied Physiology*, *135*(2), 445-455.

No, M., & Kwak, H. B. (2016). Effects of Environmental Temperature on Physiological Responses During Submaximal and Maximal Exercises in Soccer Players. *Integrative Medicine Research*, *5*(3), 216-222.

Odor, P. M., Bampoe, S., & Cecconi, M. (2017). Cardiac Output Monitoring: Validation Studies–How Results Should Be Presented. *Current Anesthesiology Reports*, *7*(4), 410–415.

Paramudita, I., Ari, T., Wijanarko, W., Putri Amanda, A., Bakti, P., Penelitian, P., Pengujian, T., Ilmu, L., Indonesia, P., Gedung, K. P., Tangerang, K., 15314, S., Puskesmas, U., Jaya, B., Kota, K., Selatan, T., Permata, J., Komplek, R., & Permata, P. (2021). The Effect of Measurement Distances and Infrared Thermometer Types for Body Temperature Measurement as Early Screening of Covid-19. *Jurnal Standarisasi*, *23*(2), 133–140.

Rowland, T. (2008). Thermoregulation During Exercise in The Heat in Children: Old Concepts Revisited. *J Appl Physiol*, *105*, 718–724.

Sandi, I. N., Ariyasa, I. G., Teresna, I. W., & Ashadi, K. (2017). Pengaruh Kelembaban Relatif Terhadap Perubahan Suhu Tubuh Latihan. *Sport And Fitness Journal*, *5*(1), 103-109.

Sari, Y., Tiga Keperawatan, D., Keperawatan Yatna Yuana Lebak, A., & Jenderal Sudirman, J. (2021). Aktivitas Fisik Dan Tingkat Depresi Lansia Di Masa Pandemi. *Jurnal Kesehatan Mercusuar*, *4*(2), 11–18.

Sasna Junaidi, N., Daruwati, I., Febriani, Y., & Genesa Hatika, R. (2018). Keterkaitan Fisika Dalam Pembelajaran Sistem Adaptasi Tubuh Manusia Terhadap Perubahan Suhu. *Collaborative Medical Journal (Cmj)* (Vol. 1).

T. Balachandran, A., Wang, Y., Szabo, F., Watts-Battey, C., Schoenfeld, B. J., Zenko, Z., & Quiles, N. (2023). Comparison of Traditional Vs. Lighter Load Strength Training on Fat-Free Mass, Strength, Power and Affective Responses in Middle and Older-Aged Adults: A Pilot Randomized Trial. *Experimental Gerontology*, *178*.

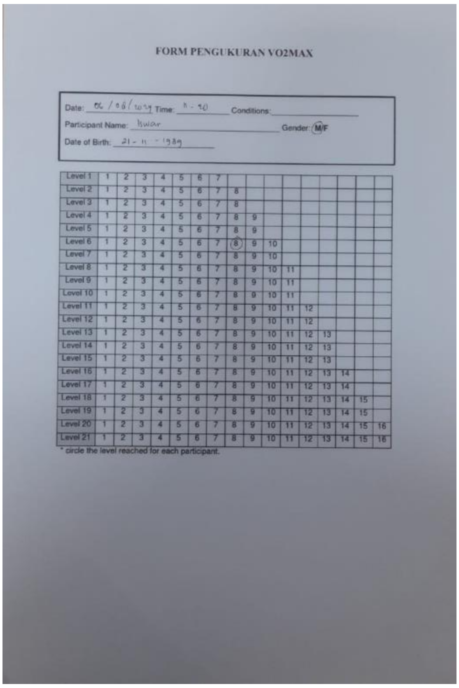
Yeoh, W. K., Lee, J. K. W., Lim, H. Y., Gan, C. W., Liang, W., & Tan, K. K. (2017). Re-Visiting The Tympanic Membrane Vicinity as Core Body Temperature Measurement Site. *Plos One*, *12*(4).

Yunita Widodo, L., Sri Hanani, E., Pendidikan Jasmani Kesehatan Dan Rekreasi, J., & Ilmu Keolahragaan, F. (2021). Profil Vo2max Peserta Ekstrakurikuler Olahraga Bolabasket Di Sma Negeri 3 Kota Tegal. *Indonesian Journal For Physical Education And Sport*, *2*(2), 650–661.

Zaki, R. (2017). Validation of Instrument Measuring Continuous Variable in Medicine. Dalam *Advances n Statistical Methodologies And Their Application To Real Problems*. Intech.

LAMPIRAN

Lampiran 1. Hasil VO2max responden

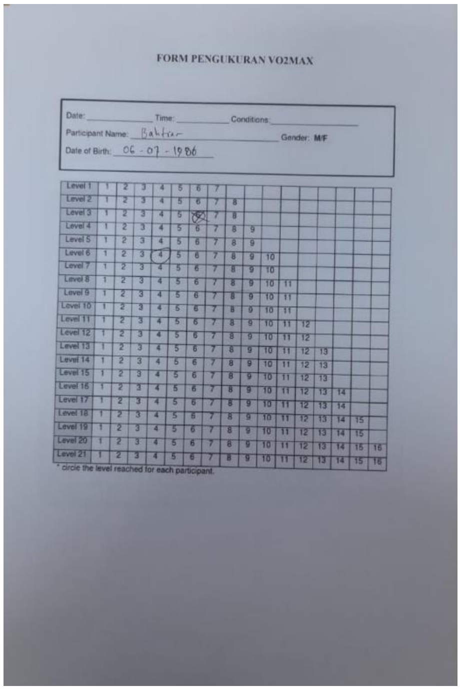


FORM PENGUKURAN VO2MAX

Date: 06/08/2019 Time: 8-10 Conditions:
Participant Name: Iswar Gender: M/F
Date of Birth: 21-11-1989

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

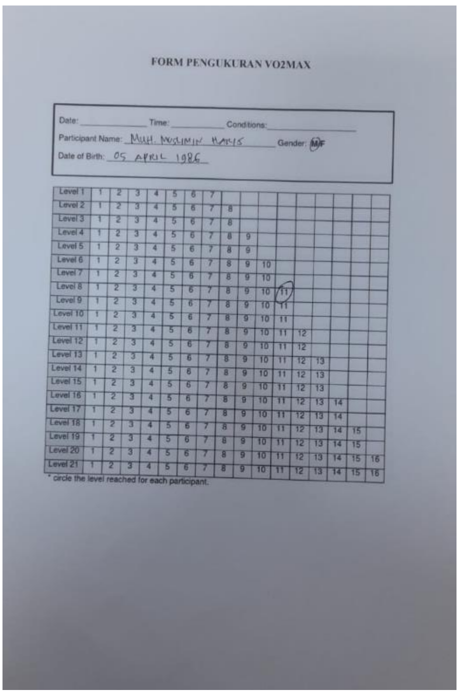


FORM PENGUKURAN VO2MAX

Date: Time: Conditions:
Participant Name: Bahtiar Gender: M/F
Date of Birth: 06-07-1986

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

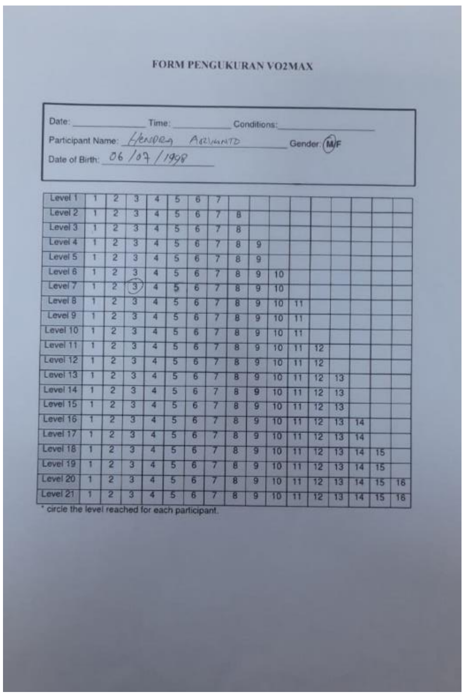


FORM PENGUKURAN VO2MAX

Date: Time: Conditions:
Participant Name: MUH. MUSLIMIN HARIS Gender: M/F
Date of Birth: 05 APRIL 1986

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

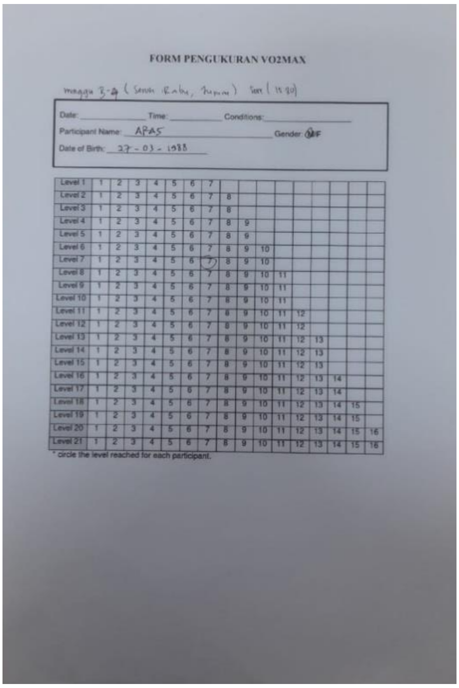


FORM PENGUKURAN VO2MAX

Date: Time: Conditions:
Participant Name: HENDRA ARDIANTO Gender: M/F
Date of Birth: 06/07/1998

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



FORM PENGUKURAN VO2MAX

minggu 3-4 (Senin Rabu, Jumat) Sore (15.30)

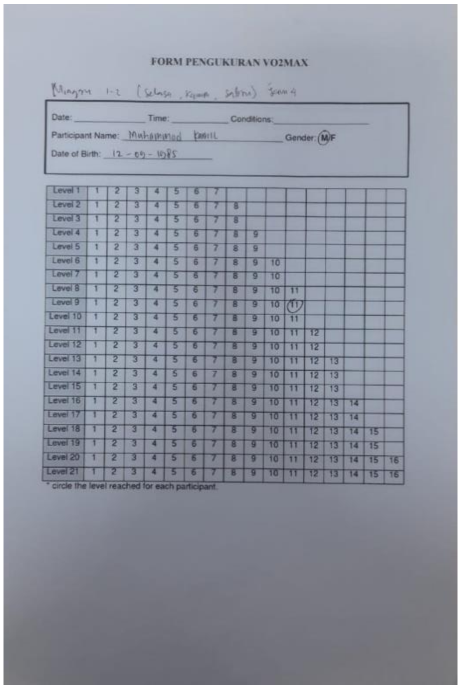
Date: ______ Time: ______ Conditions: ______

Participant Name: APAS Gender: M/F

Date of Birth: 27 - 03 - 1988

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



FORM PENGUKURAN VO2MAX

Minggu 1-2 (Selasa, Kamis, Sabtu) Jam 4

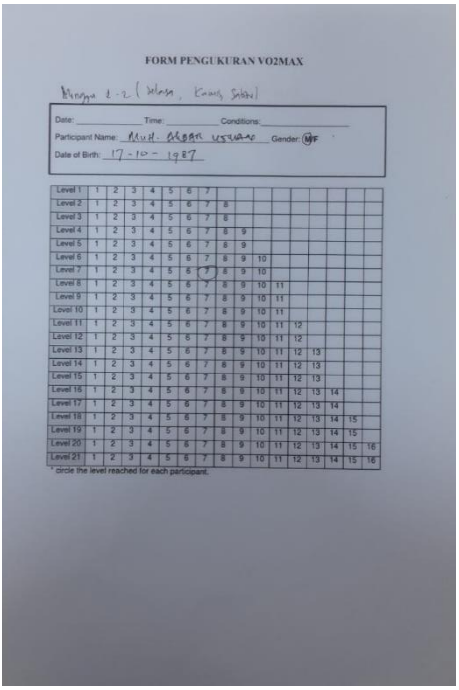
Date: ______ Time: ______ Conditions: ______

Participant Name: Muhammad Kamil Gender: M/F

Date of Birth: 12 - 09 - 1985

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



FORM PENGUKURAN VO2MAX

Minggu 1-2 (Selasa, Kamis, Sabtu)

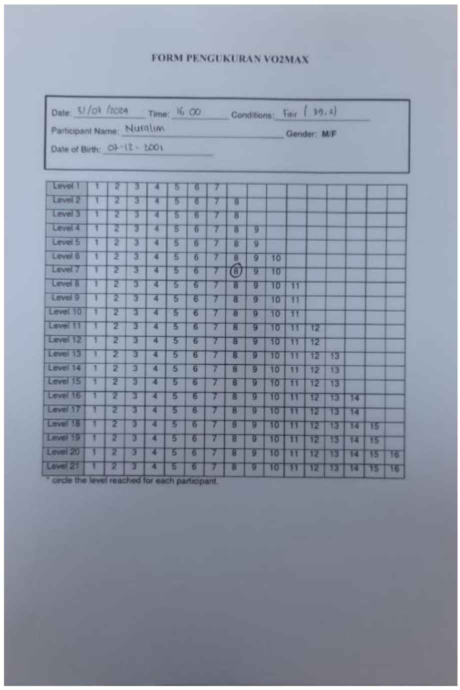
Date: ______ Time: ______ Conditions: ______

Participant Name: MUH. AKBAR USMAN Gender: M/F

Date of Birth: 17 - 10 - 1987

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



FORM PENGUKURAN VO2MAX

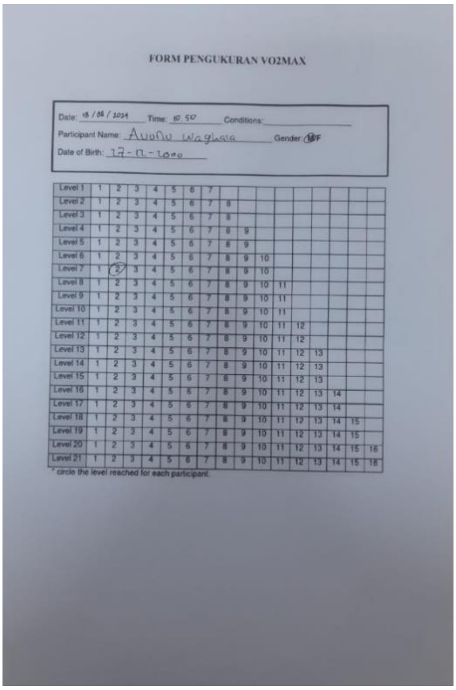
Date: 31/07/2024 Time: 16.00 Conditions: Fair (39,2)

Participant Name: Nurulim Gender: M/F

Date of Birth: 07-12-2001

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

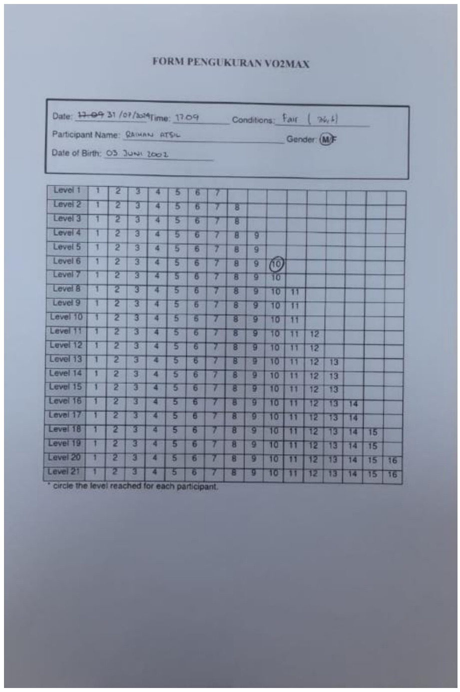


FORM PENGUKURAN VO2MAX

Date: 18 / 08 / 2024 Time: 10.50 Conditions:
Participant Name: Auuru Waghaia Gender: M/F
Date of Birth: 17 - 12 - 2000

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

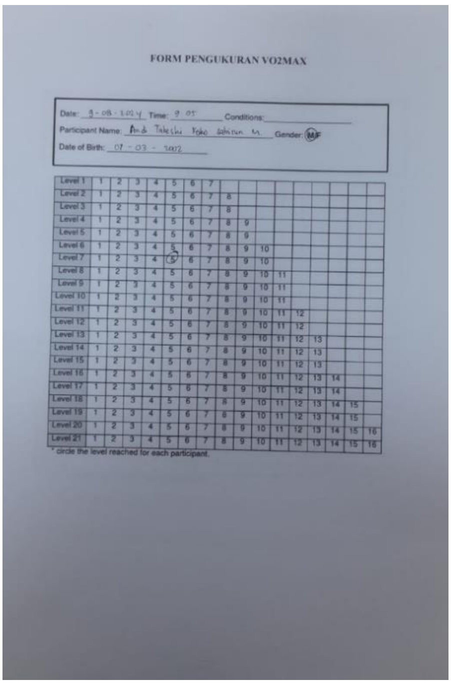


FORM PENGUKURAN VO2MAX

Date: ~~17-09~~ 31 /07/2024 Time: 17.09 Conditions: Fair (36,4)
Participant Name: RAIHAN ATSIL Gender: M/F
Date of Birth: 03 JUNI 2002

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

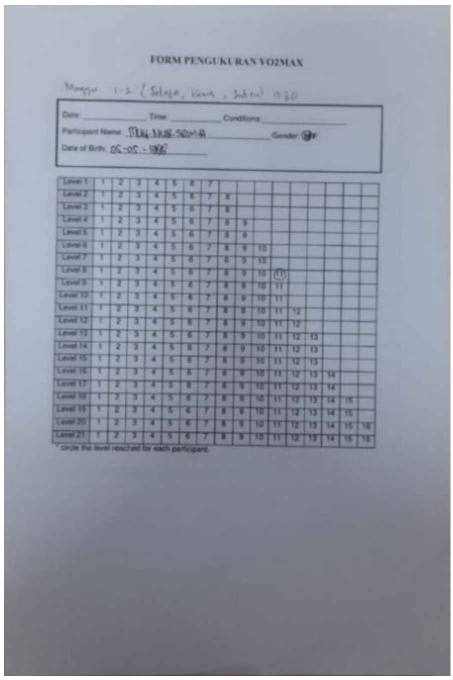


FORM PENGUKURAN VO2MAX

Date: 9 - 08 - 2024 Time: 9.05 Conditions:
Participant Name: Andi Takeshi Yoko Ashirun M Gender: M/F
Date of Birth: 07 - 03 - 2002

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



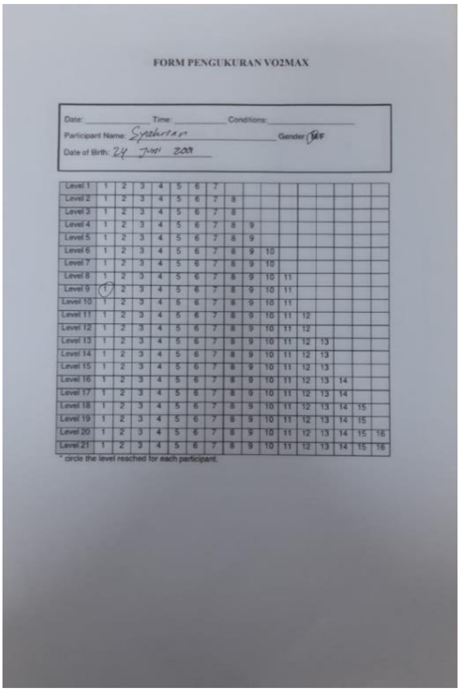
FORM PENGUKURAN VO2MAX

Minggu 1-2 (Selasa, Kamis , Sabtu) 15:30

Date: Time: Conditions:
Participant Name: MUH. NUR SOMA Gender: M/F
Date of Birth: 05-05 - 1998

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

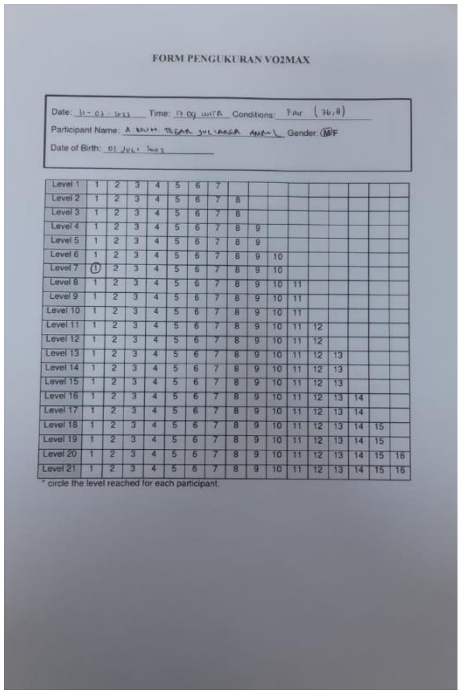


FORM PENGUKURAN VO2MAX

Date: ____ Time: ____ Conditions: ____
Participant Name: Syahrizan Gender: M/F
Date of Birth: 24 Juni 2001

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

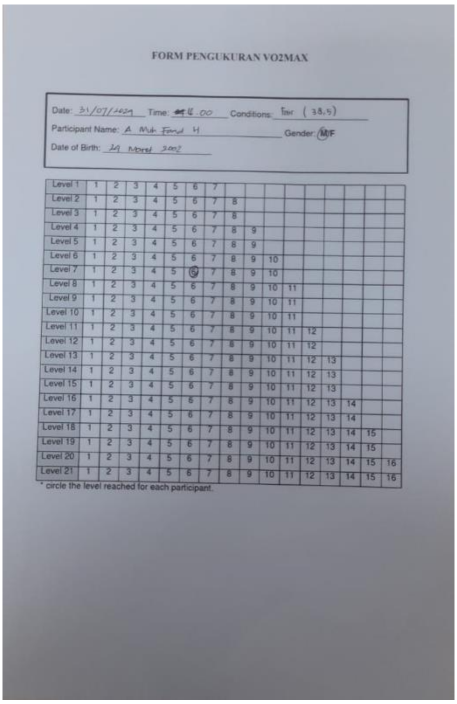


FORM PENGUKURAN VO2MAX

Date: 31-07-2023 Time: 17.09 WITA Conditions: Fair (36,0)
Participant Name: A. MUH. TEGAR JULIANGA AMAL Gender: M/F
Date of Birth: 07 JULI 2003

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

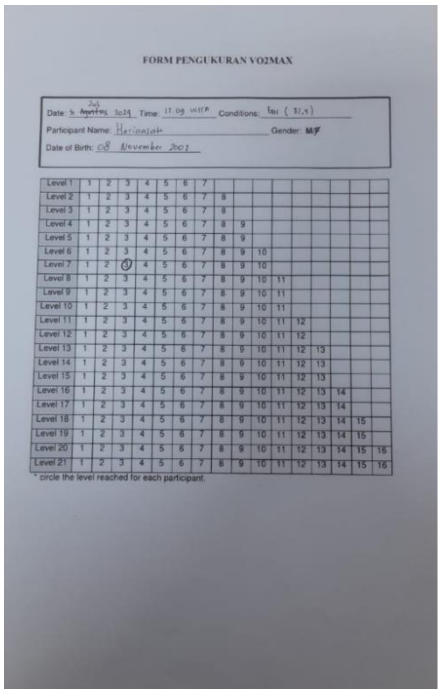


FORM PENGUKURAN VO2MAX

Date: 31/07/2024 Time: ~~17~~ 16.00 Conditions: Fair (38,5)
Participant Name: A. Muh. Farid H Gender: M/F
Date of Birth: 29 Maret 2002

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.



FORM PENGUKURAN VO2MAX

Date: 31 Juli ~~Agustus~~ 2024 Time: 17.09 WITA Conditions: Fair (37,5)
Participant Name: Herionsah Gender: M/F
Date of Birth: 08 November 2003

Level 1	1	2	3	4	5	6	7									
Level 2	1	2	3	4	5	6	7	8								
Level 3	1	2	3	4	5	6	7	8								
Level 4	1	2	3	4	5	6	7	8	9							
Level 5	1	2	3	4	5	6	7	8	9							
Level 6	1	2	3	4	5	6	7	8	9	10						
Level 7	1	2	3	4	5	6	7	8	9	10						
Level 8	1	2	3	4	5	6	7	8	9	10	11					
Level 9	1	2	3	4	5	6	7	8	9	10	11					
Level 10	1	2	3	4	5	6	7	8	9	10	11					
Level 11	1	2	3	4	5	6	7	8	9	10	11	12				
Level 12	1	2	3	4	5	6	7	8	9	10	11	12				
Level 13	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 14	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 15	1	2	3	4	5	6	7	8	9	10	11	12	13			
Level 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 17	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Level 18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Level 20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Level 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

* circle the level reached for each participant.

Lampiran 2. Dataset chip MLX90614

Melexis
Microelectronic Integrated Systems

MLX90614 family

Single and Dual Zone
Infra Red Thermometer in TO-39

Features and Benefits

- Small size, low cost
- Easy to integrate
- Factory calibrated in wide temperature range:
  -40 to 125 ˚C for sensor temperature and
  -70 to 380 ˚C for object temperature.
- High accuracy of 0.5°C over wide temperature range (0..+50°C for both Ta and To)
- High (medical) accuracy calibration optional
- Measurement resolution of 0.02°C
- Single and dual zone versions
- SMBus compatible digital interface
- Customizable PWM output for continuous reading
- Available in 3V and 5V versions
- Simple adaptation for 8 to 16V applications
- Power saving mode
- Different package options for applications and measurements versatility
- Automotive grade

Applications Examples

- High precision non-contact temperature measurements;
- Thermal Comfort sensor for Mobile Air Conditioning control system;
- Temperature sensing element for residential, commercial and industrial building air conditioning;
- Windshield defogging;
- Automotive blind angle detection;
- Industrial temperature control of moving parts;
- Temperature control in printers and copiers;
- Home appliances with temperature control;
- Healthcare;
- Livestock monitoring;
- Movement detection;
- Multiple zone temperature control – up to 100 sensors can be read via common 2 wires
- Thermal relay/alert
- Body temperature measurement

Ordering Information

Part No. MLX90614 X X X
(1) (2) (3)

(1) Supply Voltage:
A - 5V power (adaptable for 12V)
B - 3V power

(2) Number of thermopiles:
A – single zone
B – dual zone

(3) Package type:
A – Filter inside
B – Filter outside

1 Functional diagram

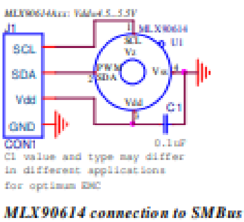


Figure 1 Typical application schematics

2 General Description

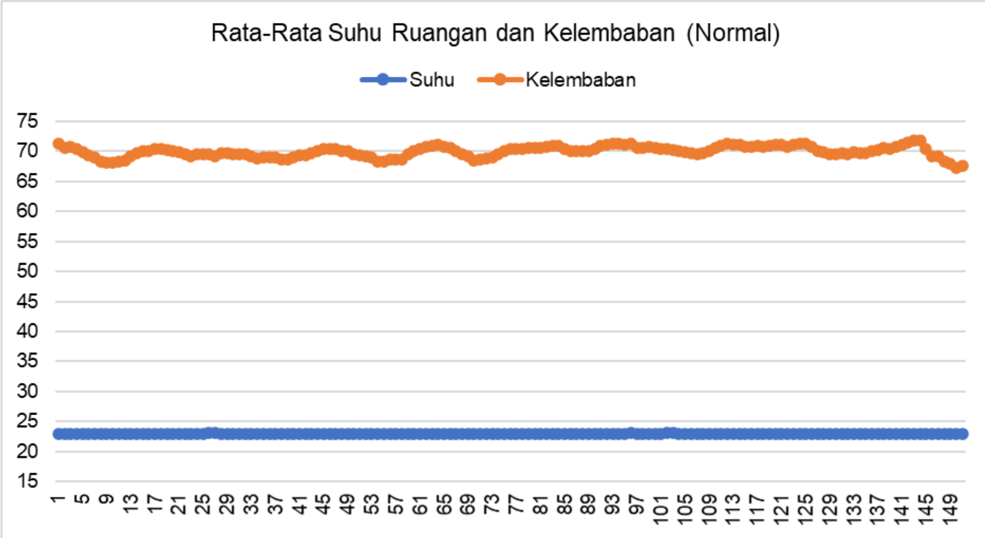
The MLX90614 is an Infra Red thermometer for non contact temperature measurements. Both the IR sensitive thermopile detector chip and the signal conditioning ASSP are integrated in the same TO-39 can.
Thanks to its low noise amplifier, 17-bit ADC and powerful DSP unit, a high accuracy and resolution of the thermometer is achieved.
The thermometer comes factory calibrated with a digital PWM and SMBus output.
As a standard, the 10-bit PWM is configured to continuously transmit the measured temperature in range of -20 to 120 ˚C, with an output resolution of 0.14 ˚C.
The POR default is SMBus interface

3901090614
Rev 1.0

Page 1 of 35

Data Sheet
14/Sep/2006

Lampiran 3. Grafik rata-rata suhu dan kelembaban ruangan (normal)



Lampiran 4. Hasil uji ICC pada kelompok usia EA

- Kondisi tanpa beban

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.870[a]	.763	.928	16.272	49	49	.000
Average Measures	.931[c]	.866	.963	16.272	49	49	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

- Kondisi dengan beban

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.569[a]	.312	.740	4.171	49	49	.000
Average Measures	.725[c]	.475	.851	4.171	49	49	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Lampiran 5. Hasil uji ICC pada kelompok usia MA

- Kondisi tanpa beban

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.952[a]	.743	.983	71.887	49	49	.000
Average Measures	.975[c]	.852	.991	71.887	49	49	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

- Kondisi dengan beban

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.790[a]	.081	.929	19.422	49	49	.000
Average Measures	.883[c]	.150	.963	19.422	49	49	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Lampiran 6. Hasil uji ICC pada kelompok usia LA

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.895[a]	.587	.959	29.928	49	49	.000
Average Measures	.945[c]	.740	.979	29.928	49	49	.000

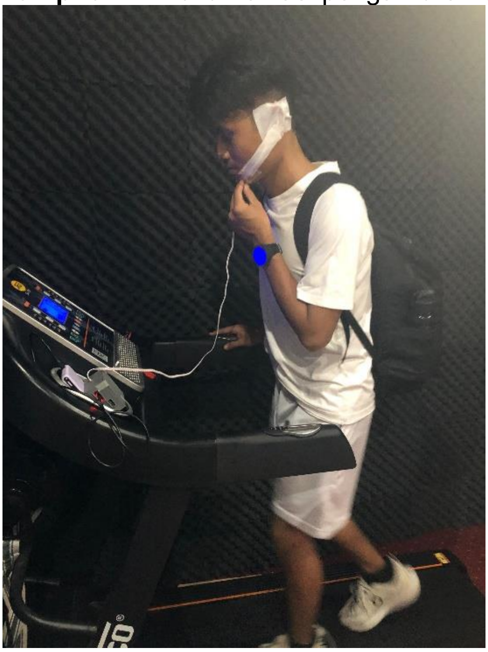
Two-way mixed effects model where people effects are random and measures effects are fixed.

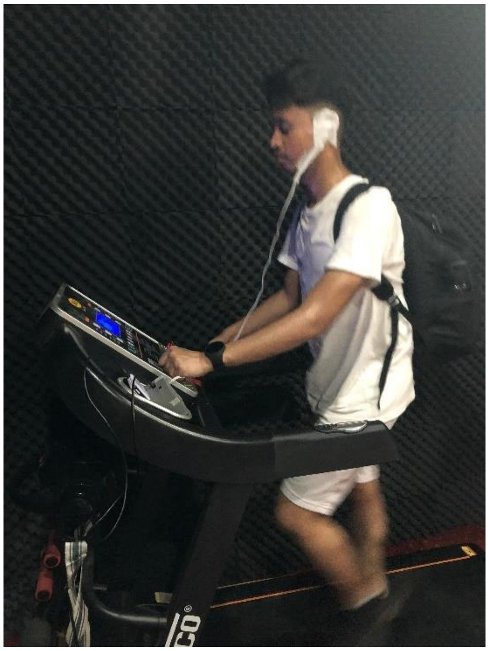
a. The estimator is the same, whether the interaction effect is present or not.

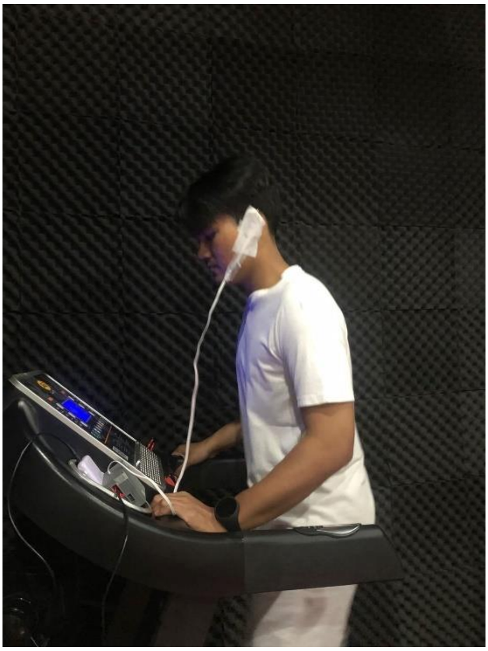
b. Type A intraclass correlation coefficients using an absolute agreement definition.

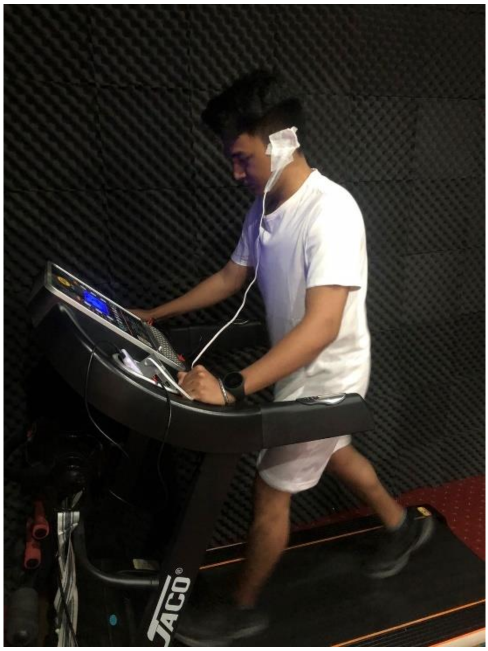
c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Lampiran 7. Dokumentasi pengambilan data

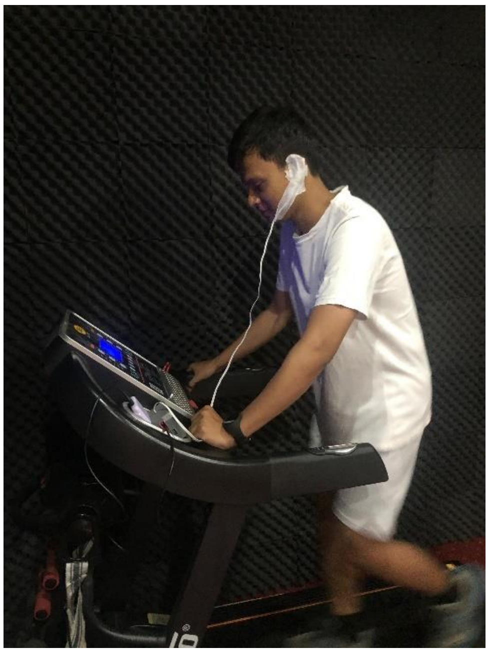


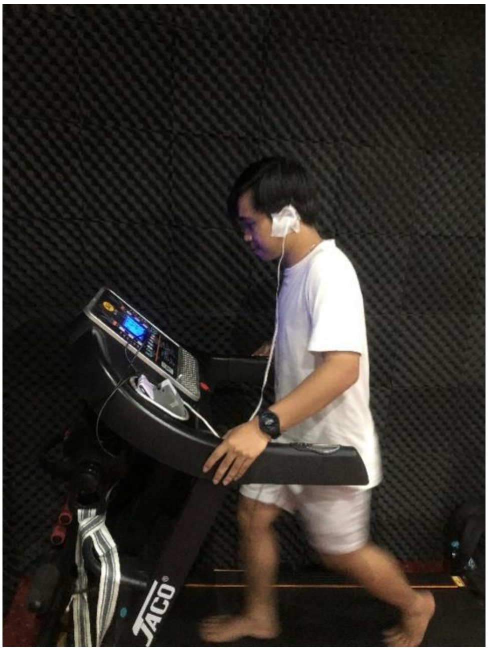


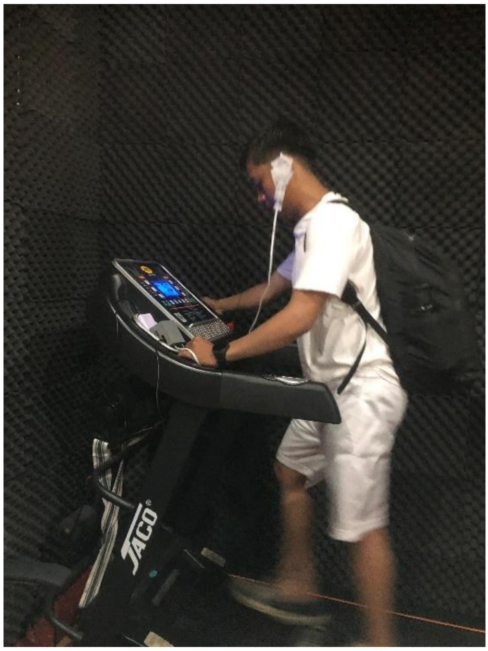


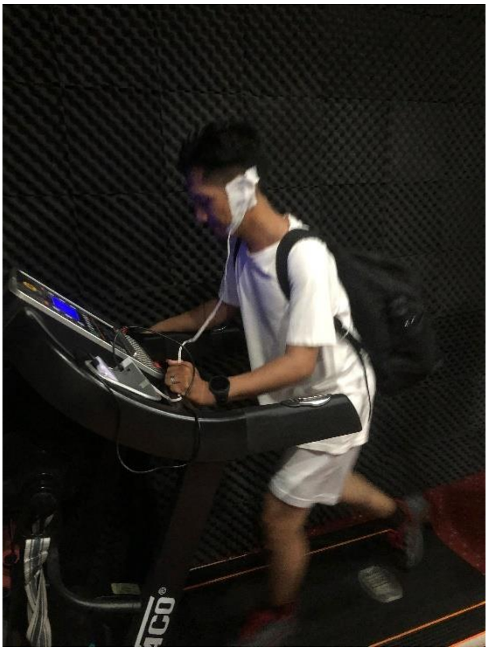

JACO

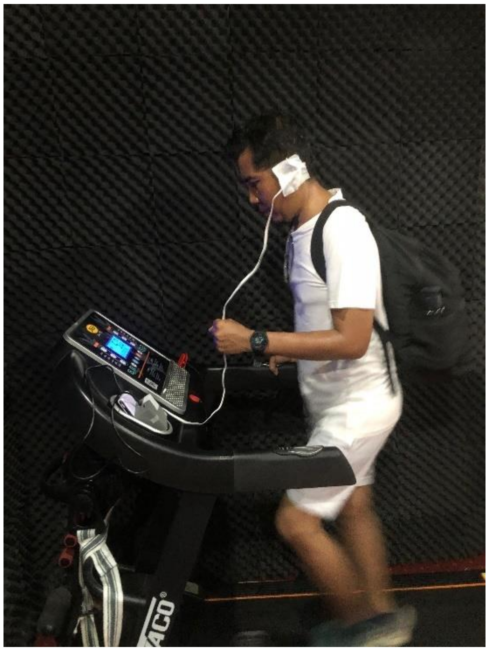

JACO

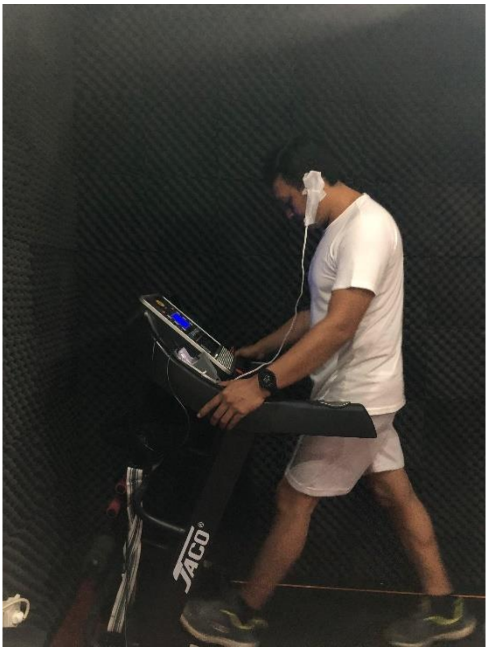


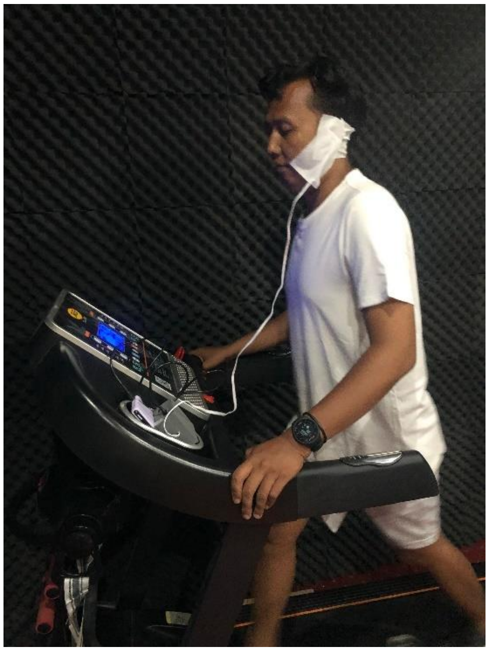

JACO

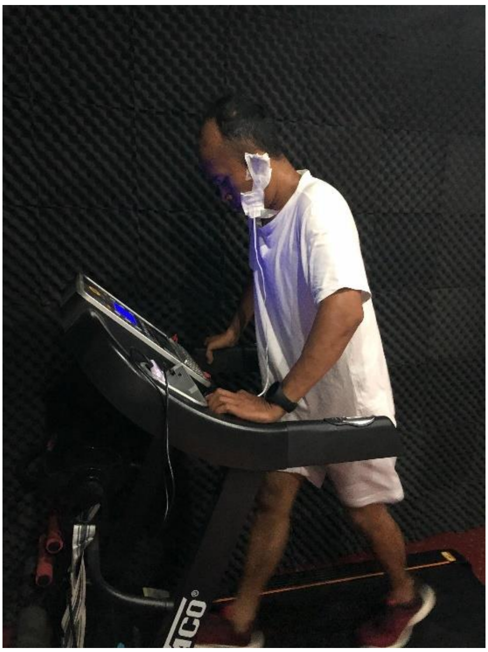

JACO

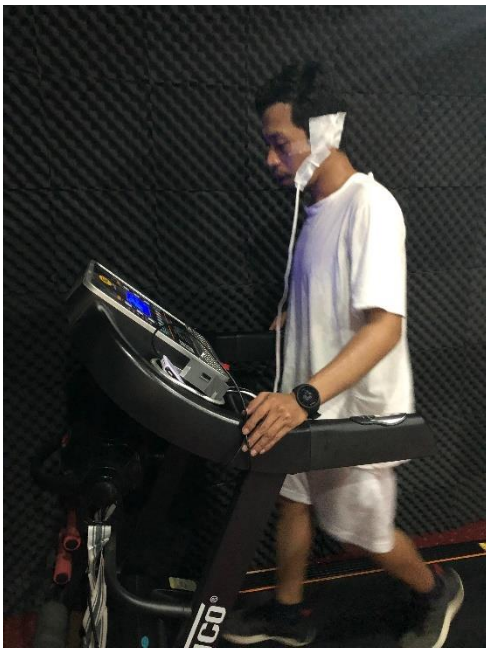




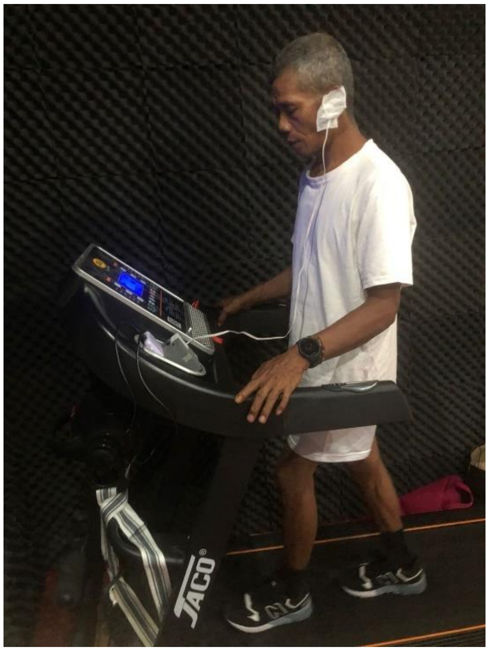

JACO



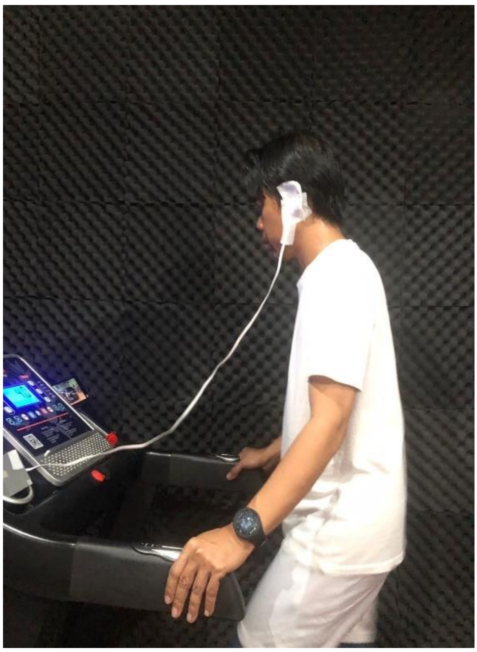


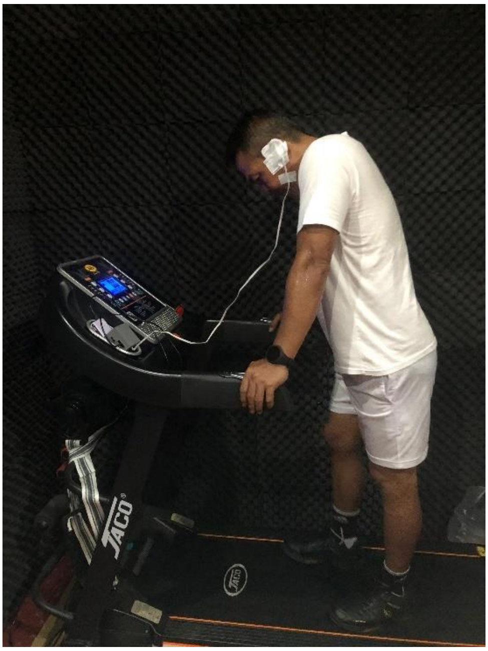


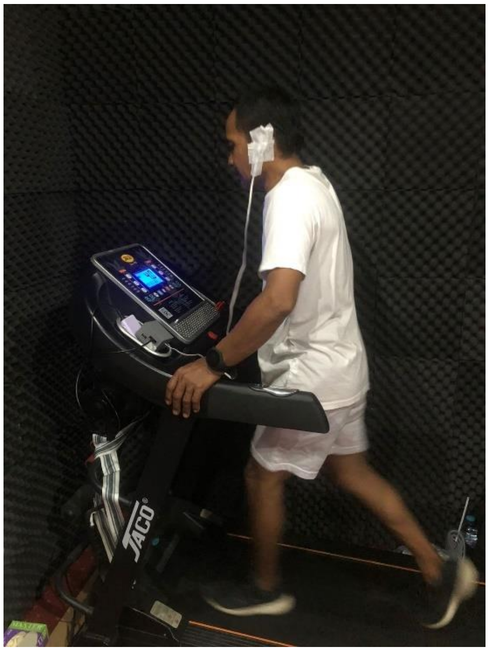

JACO

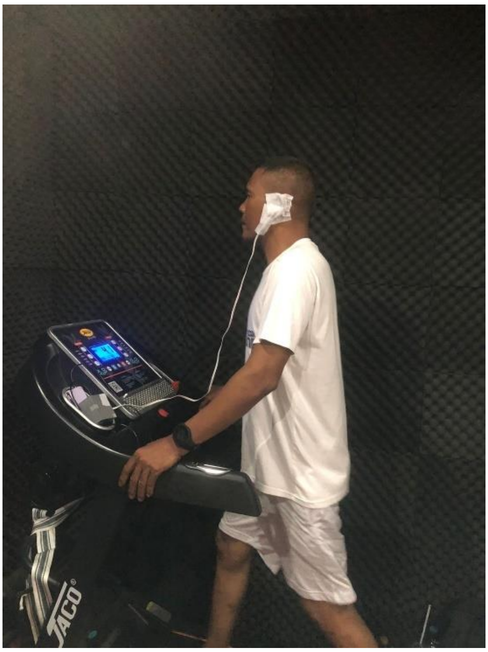

JACO

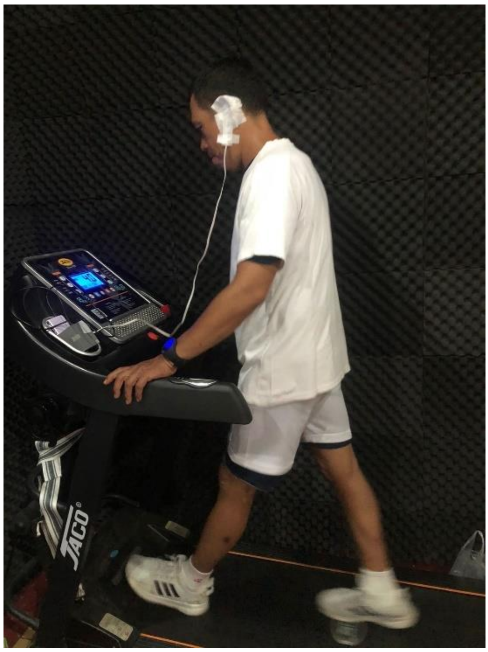

JACO




JACO


JACO


JACO


JACO