

DAFTAR PUSTAKA

- Adams, MR & Moss, M,O. 2008. Food microbiology. Third Ed. Royal Society of Chemistry. Cambridge CB. WF:UK.
- Adawyah, R. 2007. Pengolahan dan Pengawetan Ikan. Jakarta: Bumi Aksara.
- Afrianto, E & E. Liviawaty. 1989. Pengawetan dan Pengolahan Ikan. Kanisius. Yogyakarta
- Afrianto, E., E. Liviawaty. 2010. Penanganan Ikan Segar, Bandung : Penerbit Widya Padjadjaran.
- Afrianto E, Evi Liviawaty, Otong Suhara, dan Herman Hamdani. (2014). Pengaruh Suhu dan Lama Blansing Terhadap Penurunan Kesegaran Filet Tagih Selama Penyimpanan Suhu Rendah. Jurnal Akuatika. Vol. V No.1, hlm:45-54.
- Amri, K., dan Khairuman. 2008. Buku Pintar Budidaya 15 Ikan Konsumsi . Agro Media Pustaka. Jakarta
- Anonim. 2005. Lele Paiton Varietas Baru Yang Menjanjikan. Dikutip dari www.dkp.go.id pada tanggal 5 juli 2010 pukul 10.23 WIB.
- Anonim. 1994. Standar Nasional Indonesia. Balai Bimbingan dan Pengujian Mutu Hasil Perikanan. Dirgen Perikanan dan Kelautan. Jakarta
- Astawan, M. 2008. Lele Bantu Pertumbuhan Janin. Dikutip dari [Http://Wilystra2007.MulTibly.com/jurnal/item/62/lele_bantu_pertumbuhan_janin](http://Wilystra2007.MulTibly.com/jurnal/item/62/lele_bantu_pertumbuhan_janin) (13 spetember 2008)
- Asy'ari Aziz, Alwi. 2012. Desain Sistem Pendingin Ruang Muat Kapal Ikan Tradisional Dengan Memanfaatkan Es Kering, Tugas Akhir S-1, Surabaya: Teknik Sistem Perkapalan FTK-ITS.
- AOAC. 1995. Official Methods of Analysis of the Association of Official Analytical chemist. Association of Official Analytical Chemist. Washington DC: AOAC Publisher.
- Badan Standardisasi Nasional. (1992). SNI 01-2973-1992. Mutu dan Cara Uji Biskuit. Jakarta: BSN.
- Badan Standar Nasional. SNI 2332.1:2015. Cara Uji Mikrobiologi–Bagian 1: Penentuan Coliform Dan Escherichia coli Pada Produk Perikanan. Badan Standardisasi Nasional
- Badan Standar Nasional. SNI 2332.3:2015. Cara Uji Mikrobilologi-Bagian 3: Pene Angka Lempeng Total (ALT) Pada Produk Perikanan. Badan Standar Nasional
- Badrul Huda dan Farikhah. 2013. Budidaya Lele Super Lengkap, Yogyakarta: Familia (Grup Relasi Inti Media, Anggota IKAPI).
- Chamidah, A., Tjahyono, A, dan Rosidi, D. 2000. Penggunaan Metode Pengasapan Cair dalam Pengembangan Ikan Bandeng Asap Tradisonal. Jurnal Ilmu-ilmu Teknik. Volume 12. No.1.

- Dutta C, Paniagrahi AK, Sengupta C. 2015. Prevalence of pathogenic bacteria in finfish and shellfish obtained from domestic markets of West Bengal, India. *Frontiers in Environmental Microbiology* 1 (2) : 14-18.
- Dwiyitno. 2010. Identifikasi bakteri patogen pada produk perikanan dengan teknik molekuler. *Jurnal Squalen* 5(2):67-78.
- Elfariyanti & Nina Ismayanti. 2019. Penentuan Angka Lempeng Total (ALT) Pada Ikan Kayu Yang Dijual Di Pasar Peunayong Kota Banda Aceh. *JUKEMA* Vol. 5(1): 392-396
- Fahrul. 2019. Pemetaan Kualitas Ikan Cakalang (*Katsuwonus pelamis*) Segar Yang Dipasarkan Di Provinsi Sulawesi Selatan. Sekolah Pascasarjana Universitas Hasanuddin Makassar . Disertasi
- Fardiaz, S. 1993. Analisis Mikrobiologi Pangan. PT. Raja Grafindo Persada. Jakarta.
- Gelman A, Glatman L, Drabkin V, Harpaz S. 2001. Effect of storage temperature and preservative treatment on shelf life of the pond-raised freshwater fish, silver perch (*Bidyanus bidyanus*). *Journal Food Protection* 64:1584-1591.
- Hadiwiyoto. 1993. Teknologi Hasil Perikanan. Jilid 1. Yogyakarta: Penerbit Liberty.
- Ilyas S. 1993. Teknologi Refrigerasi Hasil Perikanan Jilid I Teknik Pendinginan Ikan. Pusat Penelitian dan Pengembangan Perikanan. Jakarta.
- Ilyas, S. 1983. Teknologi Refrigerasi Hasil Perikanan. Jilid II. Teknik Pendinginan Ikan. CV Paripurna. Jakarta
- Irianto, A. 2007. Potensi Mikroorganisme: Di Atas Langit Ada Langit. Ringkasan Orasi Ilmiah di Fakultas Biologi Universitas Jenderal Sudirman.
- Junianto, 2003. Teknik Penanganan Ikan, Yogyakarta: Penebar Swadaya.
- KKP. 2018. Kementrian Kelautan dan Perikanan dalam Angka. Kementrian Kelautan dan Perikanan. <http://www.perikanan-budidaya.dkp.go.id>.
- Litaay, C, Wisudo, S.H, Haluan, J & Harianto B. 2017. Pengaruh Metode Pendinginan dan Waktu Penyimpanan Terhadap Mutu Organoleptik Ikan Cakalang Segar. *Jurnal Ilmu dan Teknologi Kelautan Tropis* Vol 9 No.2 Hlm. 717-726
- Moeljanto, 1992. Pengawetan dan Pengolahan Hasil Perikanan, Jakarta : Penebar Swadaya.
- Munandar, A., Nurjannah dan M. Nurilmala. 2009. Kemunduran Mutu Ikan Nila (*Oreochromis niloticus*) pada Penyimpanan Suhu Rendah dengan Perlakuan Cara Kematian dan Penyiangan. *Jurnal Teknologi Pengolahan Hasil Perikanan Indonesia*, 11 (2): 88-101.
- Nasruddin. 2010. Jurusan Sukses Beternak Lele Sangkuriang. Penebar. Swadaya. Jakarta. 150 Hal.
- Palemba, Yoelan. 2017. Kajian Mutu Ikan Layang (*Decapterus* sp.) Segar dengan Metode Pendinginan Es Balok (Curah) Serta Penerapan Sistem Drainasedan dan Lama Penyimpanan Es di Sorong Papua Barat. Tugas Akhir Program Magister (TAPM). Universitas Terbuka. Jakarta.

- Purnomo, S. 2002. Teknologi Pengolahan Hasil Perikanan. Jakarta: Pusat Penerbitan universitas Terbuka.
- Puspitasari, R.L., Dewi, E., Yorianta, S.H., Fatihah, D.Q., Fatkhurokhim. 2017. Deteksi Bakteri Pencemar Lingkungan (Coliform) Pada Ikan Sapu-Sapu Asal Sungai Ciliwung .Jurnal AL-AZHAR INDONESIA SERI SAINS DAN TEKNOLOGI, Vol. 4(1) : 24-27.
- Rustamaji. 2009. Aktivitas Enzim Katepsin dan Kolagenase dari Daging Ikan Bandeng (*Chanos chanos* Forskall) selama Periode Kemunduran Mutu Ikan. Bogor: IPB.
- Saparinto, C. 2009. Budidaya Ikan di Kolam Terpal. Jakarta: Lewis Publisher.
- Sari, N. A. 2012. Pemberian Sinbiotik dengan Dosis Berbeda untuk Meningkatkan Kinerja Pertumbuhan dan Respon Imun Benih Ikan Patin *Pangasius sp.* [SKRIPSI]. Institut Pertanian Bogor. Bogor
- Sudarmadji, S., R. B. Kasmidjo, Sardjono, Djoko Wibowo, S. Margino, dan E. S. Rahayu. (1989). Mikrobiologi Pangan. Pusat Antar Universitas Pangan dan gizi. Universitas Gadjah Mada. Yogyakarta.
- Suryawan, A. G. 2004. Karakteristik perubahan mutu ikan selama penanganan oleh nelayan tradisional dengan jaring rampus (studi kasus di Kaliadem, Muara Angke, DKI Jakarta. Skripsi. Departemen Teknologi Hasil Perikanan. Fakultas Perikanan dan Ilmu Kelautan. Institut Pertanian Bogor. Bogor.
- Swadaya. 2008. Agribisnis Perikanan. Jakarta: Penebar Swadaya, 2008
- Tangahu Y. 2014. Uji kuantitatif Cemaran Bakteri Pada Makanan Siomay di Kota Gorontalo. Gorontalo.
- Zaki. 2009. Budi Daya Ikan Lele (*Clarias batrachus*). Dikutip dari [\(http://wilystra2008.biologi.com/journal/item/54/Budi_Daya_Ikan_Lele\(*Clarias batrachus*\)\)](http://wilystra2008.biologi.com/journal/item/54/Budi_Daya_Ikan_Lele(Clarias_batrachus)) (September 2008)

LAMPIRAN

Lampiran 1. Hasil Uji Normalitas

| | Tests of Normality | | | | | |
|--------------|---------------------------------|----|-------|--------------|----|------|
| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | Statistic | df | Sig. | Statistic | Df | Sig. |
| Coliform | ,180 | 5 | ,200* | ,954 | 5 | ,765 |
| ALT | ,380 | 5 | ,017 | ,675 | 5 | ,005 |
| Organoleptik | ,216 | 5 | ,200* | ,885 | 5 | ,332 |
| Suhu | ,224 | 5 | ,200* | ,944 | 5 | ,693 |
| Ph | ,241 | 5 | ,200* | ,821 | 5 | ,119 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Lampiran 2. Hasil analisis parameter utama terhadap lama penyimpanan

a. Coliform

| Model Summary | | | |
|---------------|----------|-------------------|----------------------------|
| R | R Square | Adjusted R Square | Std. Error of the Estimate |
| ,996 | ,992 | ,968 | 1,673 |

The independent variable is Lama penyimpanan.

| ANOVA | | | | | |
|------------|----------------|----|-------------|--------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | 343,540 | 3 | 114,513 | 40,898 | ,114 |
| Residual | 2,800 | 1 | 2,800 | | |
| Total | 346,340 | 4 | | | |

The independent variable is Lama penyimpanan.

| | Coefficients | | | | |
|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| Lama penyimpanan | -6,437 | ,845 | -5,469 | -7,615 | ,083 |
| Lama penyimpanan ** 2 | ,552 | ,107 | 9,781 | 5,143 | ,122 |
| Lama penyimpanan ** 3 | -,012 | ,004 | -4,381 | -3,439 | ,180 |
| (Constant) | 34,800 | 1,661 | | 20,947 | ,030 |

b. Angka Lempeng Total (ALT)

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,973 | ,947 | ,787 | 1239,452 |

The independent variable is Lama penyimpanan.

ANOVA

| | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|-------|------|
| Regression | 27351078,571 | 3 | 9117026,190 | 5,935 | ,291 |
| Residual | 1536241,429 | 1 | 1536241,429 | | |
| Total | 28887320,000 | 4 | | | |

The independent variable is Lama penyimpanan.

Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Lama penyimpanan | 567,024 | 626,087 | 1,668 | ,906 | ,531 |
| Lama penyimpanan ** 2 | -94,743 | 79,502 | -5,813 | -1,192 | ,444 |
| Lama penyimpanan ** 3 | 4,113 | 2,613 | 5,143 | 1,574 | ,360 |
| (Constant) | 201,857 | 1230,567 | | ,164 | ,896 |

Lampiran 3. Hasil analisis antara parameter pendukung terhadap lama penyimpanan

a. Organoleptik

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,965 | ,930 | ,907 | ,095 |

The independent variable is Lama penyimpanan.

ANOVA

| | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|--------|------|
| Regression | ,361 | 1 | ,361 | 40,111 | ,008 |
| Residual | ,027 | 3 | ,009 | | |
| Total | ,388 | 4 | | | |

The independent variable is Lama penyimpanan.

Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------------|-----------------------------|------------|---------------------------|---------|------|
| | B | Std. Error | Beta | | |
| Lama penyimpanan | -,038 | ,006 | -,965 | -6,333 | ,008 |
| (Constant) | 8,600 | ,073 | | 117,031 | ,000 |

b. Suhu

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,979 | ,959 | ,945 | 1,114 |

The independent variable is Lama penyimpanan.

ANOVA

| | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|--------|------|
| Regression | 86,436 | 1 | 86,436 | 69,632 | ,004 |
| Residual | 3,724 | 3 | 1,241 | | |
| Total | 90,160 | 4 | | | |

The independent variable is Lama penyimpanan.

Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Lama penyimpanan | ,588 | ,070 | ,979 | 8,345 | ,004 |
| (Constant) | 16,020 | ,863 | | 18,563 | ,000 |

c. pH

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,949 | ,900 | ,867 | ,037 |

The independent variable is Lama penyimpanan.

ANOVA

| | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|--------|------|
| Regression | ,036 | 1 | ,036 | 27,000 | ,014 |
| Residual | ,004 | 3 | ,001 | | |
| Total | ,040 | 4 | | | |

The independent variable is Lama penyimpanan.

Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------------|-----------------------------|------------|---------------------------|---------|------|
| | B | Std. Error | Beta | | |
| Lama penyimpanan | ,012 | ,002 | ,949 | 5,196 | ,014 |
| (Constant) | 7,080 | ,028 | | 250,316 | ,000 |

Lampiran 4. Hasil analisis hubungan antara uji parameter

a. Hubungan antara Suhu dengan Coliform

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,984 | ,968 | ,936 | 2,358 |

The independent variable is Suhu.

ANOVA

| | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|----|-------------|--------|------|
| Regression | 335,215 | 2 | 167,608 | 30,133 | ,032 |
| Residual | 11,125 | 2 | 5,562 | | |
| Total | 346,340 | 4 | | | |

The independent variable is Suhu.

Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Suhu | -25,692 | 3,357 | -13,109 | -7,653 | ,017 |
| Suhu ** 2 | ,601 | ,080 | 12,908 | 7,536 | ,017 |
| (Constant) | 286,261 | 34,056 | | 8,406 | ,014 |

b. Hubungan antara suhu dengan alt

Model Summary

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|------|----------|-------------------|----------------------------|
| ,849 | ,721 | ,441 | 2008,661 |

The independent variable is Suhu.

ANOVA

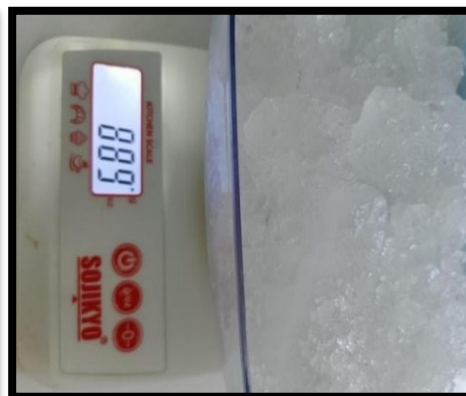
| | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|----|--------------|-------|------|
| Regression | 20817880,856 | 2 | 10408940,428 | 2,580 | ,279 |
| Residual | 8069439,144 | 2 | 4034719,572 | | |
| Total | 28887320,000 | 4 | | | |

The independent variable is Suhu.

Coefficients

| | Unstandardized Coefficients | | Standardized | t | Sig. |
|------------|-----------------------------|------------|----------------------|--------|------|
| | B | Std. Error | Coefficients Beta | | |
| Suhu | -3705,909 | 2859,226 | -6,547 | -1,296 | ,324 |
| Suhu ** 2 | 97,243 | 67,975 | 7,226 | 1,431 | ,289 |
| (Constant) | 34710,993 | 29004,908 | | 1,197 | ,354 |

Lampiran 5. Dokumentasi kegiatan penelitian



Sampel ikan lele (*C. gariepinus*)



Pengukuran suhu