DAFTAR PUSTAKA

Aboagla, E.M.E dan Terada T. 2004. Effects of egg yolk during the freezing step of *cryopreservation* on the viability of goat spermatozoa. Theriogenology. 62:1160-1172.

Agarwal, A dan Said, T. M. 2011. Interpretation of basic semen analysis and advanced semen testing. Dalam: Sabanegh ES (Ed). Current Clinical Urology. Male infertility.Problem and solution. Mexico: Humana Press.

Aku, A.S. 2005. Preservasi dan kriopreservasi semen Domba Garut (*Ovis Aries*) dalam berbagai jenis pengencer berbasis lesitin. Tesis. Sekolah Pascasarjana, Institut Pertanian Bogor, Bogor.

Alcay, S., E. Gokce, M.B. Toker, N.T. Onder, B. Ustuner, E. Uzabacı, Z. Gul, and S. Cavus. 2016. Freeze-dried egg yolk based extenders containing various antioxidants improve *post-thawing* quality and incubation resilience of goat spermatozoa. Cryobiology. 72(3):269-273.

Alcay, S, M.B. Toker, E. Gokce, B. Ustuner, N.T. Onder, H. Sagirkaya, Z. Nur, and M.K. Soylu. 2015. Successful ram semen *cryopreservation* with l*yophilized* egg yolk-based extender. Cryobiology. 71(2):329-333.

Algarubi, S.M. 2014. Effect of sperm quality of beef cattle on percentage. IJSR 3(11): 790—793.

Almadaly, E., Foad, F., Mostafa, S dan Tetsuma, M. 2014. Plasma membran integrity and morphology of frozen-thawed bull spermatozoa supplemented with desalted and *lyophilized* seminal plasma. Global Veterinaria 13 (5): 753-766.

Ansari, M.S., B.A. Rakha, S.M.H. Andrabi, and S. Akhter. 2010. Usefulness of powdered and fresh egg yolk for *cryopreservation* of Zebu bull spermatozoa. Reprod. Biol. 10(3):235-240.

Ansari, M.S., B.A. Rakhaand S. Akhter. 2017. Cryopreservation of Nili Ravi buffalo (Bubalus bubalis) semen in AndroMed® extender; in vitro and in vivo evaluation. WILEY. Reprod Dom Anim. 1–6.

Ardhani, F., Mufidah, H., Samsuriati, R., & Putra, H. P. 2020. Efek lama penyimpanan semen beku sapi bali pada pos inseminasi buatan

terhadap membran plasma, tudung akrosom utuh, dan DNA spermatozoa. Jurnal Ilmu Peternakan Terapan, 3(2), 58-66.

Ariantie, O.S., Amrozi,A., Tuty, L.Y., Nurul, T.R dan Bambang, P. 2021. The production of freeze-dried egg yolk powder and its effect on the quality of garut ram liquid semen. Jurnal Kedokteran Hewan. 15(2):37-46.

Arif, A. A., T. Maulana, E. M. Kaiin, B. Purwantara dan R. I. Arifiantini. 2022. The Quality of Frozen Semen of Limousin Bull in Various Semen Diluents. Tropical Animal Science Journal. Vol. 45 No. 3 https://doi.org/10.5398/tasj.2022.45.3.284.

Arifiantini, R.I. 2012. Teknik Koleksi dan Evaluasi Semen pada Hewan. Bogor: IPB Press.

Arifiantini, R. I., dan B. Purwantara. 2010. Motility and viability of Friesian Holstein spermatozoa in three different extender stored at 5^0 C. Jurnal of the Indonesian Tropical Animal Agriculture. Vol. 35 No.

Arvioges, Anwar, P., dan Jiyanto. 2021. Efektivitas suhu thawing terhadap keadaan membran plasma utuh (MPU) dan tudung akrosom utuh (TAU) spermatozoa sapi Bali. Jurnal Green swarnadwipa. Vol 10(2), 1-9.

Astrini, Ayu E, Nur, Ducha dan Kuswanti N. 2016. Implementasi pengencer CEP-D dalam metode pembekuan semen Sapi Limousin. Surabaya. Universitas Negeri Surabaya.

Badan Standardisasi Nasional Indonesia. (BSNI). 2005. Semen Beku Sapi. SNI 014869.1-2005. BSN. Jakarta.

Badan Standardisasi Nasional. 2017. Standar Nasional Indonesia Semen beku - Bagian I: Sapi. ICS 65.020.30. SNI 4869-1:2017. Badan Standarisasi Nasional. Jakarta.

Barek, M.E., Hine, T.M., Nalley, W.M., dan Belli, H.L. 2020. Pengaruh Penambahan Sari Wortel Dalam Pengencer Sitrat Kuning Telur Terhadap Kualitas Spermatozoa Kambing Bligon. Jurnal Nukleus Peternakan, 7(2), 109-117.

Berquist, D. H. 1995. Egg dehidration. Dalam: W. J. Stadelmen and O. J. Cotterill (Editor). Egg Science and Technology. Food Products Press. An Imprint of The Haworth Press, Inc., New York.

Blegur, J., Nalle, W.M., dan Hine, T.T. 2020. Pengaruh Penambahan Virgin Coconut Oil dalam Larutan Tris Kuning Telur Terhadap Kualitas

Spermatozoa Sapi Bali Selama Preservasi. Jurnal Nukleus Peternakan. 7(2):130-138.

Budai, C., I. Egerszegi., J. Oalah., A. Javor, & A. Kavacs. 2014. Application of semen evaluation techniques. Agrartudomanyi Kozlemenyek 59(1): 1— 10

Coppock, R. W. 2019. Nutraceuticals in Genitourinary Maladies. In: Gupta, R.C., A. Srivastava, & R. Lall. (editor). Nutraceuticals in Veterinary Medicine. Springer Nature Switzerland AG, Switzerland. pp. 489-514. https://doi. org/10.1007/978-3-030-04624-8_33

Chauhan, A.K., Swamy BMV, dan Jat RK. 2017. Pharmacological evaluation of Ageratum conyzoides linn leaves extracts for its antiulcer activities. World Journal of Pharmaceutical Research. 6(15), 1209–1226.

Chian, R. dan P. Quinn. 2010. Fertility *cryopreservation*. Cambridge University Press, United Kingdom: xiii + 260 hlm.

Chung, E.L.T., Nayan N., Nasir NSM, Hing PSA, Ramli S, Rahman MHA and Kamalludin MH, 2019. Pengaruh madu sebagai bahan tambahan kriopreservasi terhadap kualitas semen sapi jantan dari breed sapi yang berbeda dalam kondisi tropis. Jurnak Kesehatan Hewan dan Produksi. 7: 171-178.

Deka, B.C dan Rao AR. 1986. Motility of buck spermatozoa during preservation at 5°C with and without seminal plsama. Indian Vet. J. 63:169 – 170.

Diansyah, A.M., Yusuf M, Toleng AL, Dagong MIA, and Maulana T. 2022. The expression of plasma protein in bali-polled bulls using 1D-SDS page. World Vet. J., 12 (3): 316-322.
doi: https://dx.doi.org/10.54203/scil.2022.wvj40

Ducha N, Susilawati T, Aulanni'am, Sri Wahyuningsi, Pangestu M. 2012. Ultrastructure and fertilizing ability of limousin bull sperm after storage in CEP2 extender with and without egg yolk. Pakistan Journal of Biological Sciences 15 (20) : 979-985.

El-Harairy, M. A., W. A. Khalil, E. I. Khalifa, & A. A. Saber. 2018. Effect of propolis ethanolic extract supplementation to ram semen extenders on sperm characteristics, lipid peroxidation and some enzymatic activities in seminal plasma in chilled semen. Journal of Animal and Poultry Production 9:235–243.https://doi.org/10.21608/jappmu.2018.41098

Fazrien, W. A., Herwijanti E dan Isnaini. 2020. Pengaruh Perbedaan Individu terhadap Kualitas Semen Segar dan Beku Pejantan Unggul Sapi Bali. Sains Peternakan Vol. 18 (1), hal. 60-65.

Feradis, M. P. 2010. Reproductive Biotechnology in Farm Animals. Alphabeta, Bandung.

Fonseca JF, Torres CAA, Maffi li VV, Borges AM, Santos ADF, Rodrigues MT, Oliveira RFM. 2005. The Hypoosmotic swelling test in fresh goat spermatozoa. Anim Reprod 2: 139-144

Garcia, W., A. Tabarez, and M.J. Palomo. 2018. Effect of the type of egg yolk, removal of seminal plasma and donor age on ram sperm cryopreservation. Anim. Reprod. 14(4):1124-1132.

Garner, D. L. and E. S. E. Hafez. 2008. Spermatozoa and Seminal Plasma. In Reproduction in Farm Animal.Edited By Hafez. E.S.E., and B. Hafez 7th Edition. Blackwell Publishing.USA: 96-108.

Garner, D.L. and E.S.E. Hafez. 2000. Spermatozoa and seminal plasma. in reproduction in farm animal. 7th ed., E.S.E. Hafez (ed). Lea and Febiger Publishing, Philadelphia.

Guthrie HD,Welch GR. 2012. Effects of reactive oxygen species on sperm function. SciVerse Science Direct. Theriogenol.78:1700 - 1708.

Hafez, E. S. E. 2008. *Anatomy of female Reproduction*. Ed pp. 29-55.

Haryani, R., A.L. Toleng, H. Sonjaya and M. Yusuf. 2016. Characteristic of Bali bulls sperms assessed using Computerized Assisted Semen Analysis (CASA). Int. J. Sci. Basic. Appl. Res. 28 (2):161-168.

Hoesni, F. 1997. Pengaruh kadar kuning telur dalam berbagai pengencer terhadap kualitas spermatozoa domba pasca pembekuan. Program Pasca Sarjana. Universitas Padjadjaran, Bandung.

Hoesni, F. 2016. Efek penggunaan susu skim dengan pengencer tris kuning telur terhadap daya tahan hidup spermatozoa sapi. Jurnal Ilmiah Universitas Batanghari Jambi. Vol.16 No.3.

Ihsan, M.N. 2013. Pembekuan Vitrivikasi Semen Kambing Boer Dengan Tingkat Gliserol Berbeda. Jurnal Ternak Tropika. 14 (2): 38-45.

Ismaya. 2014. Bioteknologi Inseminasi Buatan pada Sapi dan Kerbau. Gadjah Mada University Press. Yogyakarta. ISBN 979-420-848-5.

Jeyendran R.S., H.H. van der Ven, M. Perez-Pelaez, B.G. Crabo, dan L.J.D. Zaneveld. 1984. Development of an assay to assess the functional integrity of the human sperm membran and its relationship to other semen characteristics. Journal Reprod Fertil. 70:219–228.

Jiménez, F. M., Puchades, S., Mocé, E., Viudes-de Cartro, M.P., Vicente, J.S. and Rodriguez, M. 2004. Use of powdered egg yolk vs fresh egg yolk for the *cryopreservation* of ovine semen. Reprod. Domest. Anim., 39: 438-44.

Juniandri., T. Susilawati, dan N. Isnaini. 2014. Perbandingan Pengenceran Andromed dan CEP-2 terhadap Kualitas Spermatozoa Sapi Hasil Seksing dengan Sentrifugasi gradient Densitas Percoll. J Vet, 15(2): 252-262.

Khalil, W. A., M. A. El-Harairy, A. E. B. Zeidan, M. A. E. Hassan and O. Mohey-Elsaeed. 2018. Evaluation of bull spermatozoa during and after *cryopreservation*: Structural and Ultrastructural Insights. International Journal of Veterinary Science and Medicine: 1-8. https://doi.org/10.1016/j.ijvsm.2017.11.001

Kumar U, Gawande AP, Sahatpure SK, Patil MS, Lakde CK, Bonde SW, Borkar PL, Poharkar AJ, Ramteke BR. 2015. Assessment of semen quality in pure and crossbred Jersey bulls. Vet World 8: 1266- 72.

Legato, M.J. 2004. Principles of gender-specific medicine. Elsevier Academic Press, USA: xvii + 1241.

Lemma, A. and T. Shemsu. 2015. Effect of age and breed on semen quality and breeding soundness evaluation of pre-service young bulls. J. Reprod. Infertil. 6(2):35-40.

Makarevich, A.V, E. Kubovicova, A.V. Sirotkin, J. Pivko. 2010. Demonstration of the effect of epidermal growth factor on ram sperm parameters using two fluorescent assays. Veterinarni Medicina. Veterinarni Medicina, 55, 2010 (12): 581–589. Vol 55 (12): 581–589

Moussa, M., V. Martinet, A. Trimeche, D. Tainturier, and M. Anton. 2002. *Low density lipoproteins* extracted from hen egg yolk by an easy method: Cryoprotective effect on frozen-thawed bull semen. Theriogenology. 57(6):1695-1706.

Mughal, D. H., A. Ijaz, M. S. Yousaf, F. Wadood, U. Farooq, S. A. Mahmood, & A. Riaz. 2018. Effect of osmotic pressure on spermatozoa characteristics of cryopreserved buffalo bull (Bubalus

bubalis) semen. J. Appl. Anim. Res. 46:274- 277. https://doi.org/10.1080/09712119.2017.1295971

Mukminat, A., dan Suharyati, S. 2014. Pengaruh penambahan berbagai umber karbohidrat pada pengencer skim kuning telur terhadap kualitas semen beku sapi Bali. Jurnal Ilmiah Peternakan Terpadu, 2(2), 87–92.

Nagara, M. B., J. Egashira, N. Katafuchi, K. Endo, K. Ogata, K. Yamanaka, T. Yamanouchi, H. Matsuda, Y. Hashiyada, & K. Yamashita. 2019. Bovine sperm selection procedure prior to cryopreservation for improvement of post thawed

Nugroho, Y., T. Susilawati, S. Wahyuningsih. 2014. Kualitas semen sapi limousin selama pendinginan menggunakan pengencer cep-2 dengan penambahan berbagai konsentrasi kuning telur dan sari buah jambu biji (Psidium guajava). J. Ternak Tropika Vol. 15, No.1: 31-42.

Ondho, Y. S. 2020. Manfaat Indogofera sp. Dibidang Reproduksi Ternak. Semarang: Universitas Diponegoro Press. 38-42.

Pajri A., Ondho Y. S. dan D. Samsudewa. 2015. Kualitas membran plasma utuh Dan tudung akrosom utuh spermatozoa sapi bali di preservasi suhu 5^0 C dalam pengencer ekstrak daun tebuh dengan penambahan kuning telur. Agromedia. Vol 33 (1).

Partodihardjo, S., 1992. Ilmu Reproduksi Hewan. Mutiara Sumber Widya. Jakarta.

Permatasari, E. T. Setiatin, dan D. Samsudewa. 2013. Studi Tentang Pengencer Kuning Telur dan Pengaruhnya terhadap Kualitas Semen Beku Sapi Jawa Brebes. Animal Agriculture Journal. 2(1):143-151.

Prastiya R.A, Tri W.S, Aldea E.D, Ani W, Anny A, Deny S and Aras PN. 2023. Green tea extract addition into a Tris-based egg yolk extender improves Bali bull sperm quality. Animal Bioscience. Vol. 36, No. 2:209-217.

Pratiwi, R. I., S. Suharyati, M. Hartono. 2014. Analisis kualitas semen beku sapi simental menggunakan pengencer andromed dengan variasi waktu pre freezing. Jurnal Ilmiah Peternakan Terpadu 2(3): 8-15.

Purwasih, R., Y. S. Ondho dan Sutopo. 2013. Efektivitas prefreezing semen sapi jawa sebagai parameter keberhasilan processing semen beku. J. Animal Agriculture. 2(1) : 44-50.

Quinn, P.J., P.Y.W. Chow, and I.G. White. 1980. Evidence that phospholipid protects ram spermatozoa from cold shock at a plasma membran site. Reproduction. 60(2):403-407.

Raheja N, Choudhary S, Grewal S, Sharma N, and Kumar N. 2018. A Review on Semen Extenders and Additives Used in Cattle and Buffalo Bull Semen Preservation. Journal of Entomology and Zoology Studies. 6(3):239- 245.

Rizal, B., Hintono A dan Nurwantoro. 2012. Pertumbuhan mikroba pada telur pasca pasteurisasi. Animal Agriculture Journal. 1(2) : 208-218

Rizal, M. dan Herdis. 2010. Peranan antioksidan dalam meningkatkan kualitas semen beku. Wartazoa. 20 (13) : 140.

Rurangwa, E., D.E. Kime, F. Ollevier, & J.P. Nash. 2004. The measurement of sperm motility and factors affecting sperm quality in cultured fish. Aquaculture 234: 1 - 28.

Sahiruddin, Widjiati, Madyawati SP. The quality of Bali bull sexed sperms at different incubation time using egg white sedimentation method. The 3rd International Conference of Animal Science and Technology; 2020 November 3-4, Makassar, Indonesia. IOP Conf Ser Earth Environ Sci 2021;788:012142.

Salisbury, G. W. dan N. L. Vandemark. 1985. Fisiologi Reproduksi dan Inseminasi Buatan Pada Sapi. Alih Bahasa Djanuar R. Yogyakarta. Gadjah Mada University Press.

Saputra, D. J., M. N. Ihsan, dan N. Isnaini. 2017. Korelasi antara lingkar skrotum dengan volume semen, konsentrasi dan motilitas spermatozoa pejantan sapi Bali. Journal of Tropical Animal Production. 18(2): 59-68.

Sawitri, N.M, Trilaksana IGNB and Puja IK, 2021. Evaluation of Bali cattle semen quality during *cryopreservation* with coconut water-based extenders. International Journal of Veterinary Science 10(4): 329-334.

Septiyani, R. 2012. Hubungan Antara Viabilitas, Motilitas dan Keutuhan Membran Plasma Spermatozoa Semen Beku Sapi Limousin. Institut Pertanian Bogor. Bogor.

Simmet, 2004. The Great Vision Behind SpermVision. Sperm Notes. The International AI Newsletter from Minitub. Special edition.

Singh, M., Barik, N.C., Ghosh, S.K., Prasad, J.K., Rajoriya, J.S., Soni, Y.K., Kumar, A., Chaudhary, J.K. and Srivastava, N. 2015. Egg yolk powder an alternative to fresh egg yolk for buffalo semen *cryopreservation*. Indian J. Anim. Sci., 85(1): 40-42.

Situmorang, P. 2002. Pengaruh penambahan eksogenous phosphoipid ke dalam pengencer tris kuning telur yang berbeda pada daya hidup spermatozoa sapi. Pusat Penelitian dan Pengembangan Peternakan dan Badan Penelitian dan Pengembangan Pertanian. Bogor. 7(3) : 181-187.

Sparks, N. H. C. 2007. The hen's egg- is its role in human nutrition changing?. World's Poultry science journal. 62(2):308-315.

Sudaryani, T. 2009. Kualitas Telur. Penebar Swadaya, Jakarta.

Sugiarto, N., Sisilawati, N., dan Wahyuningsih, S. 2014. Kualitas Semen Cair Sapi Limousin Selama Pendinginan Menggunakan Pengencer Cep-2 dengan Penambahan Berbagai Konsentrasi Sari Kedelai. J. Ternak Tropika 15(1): 51-57

Susilawati, S. 2010. Efek Waktu Sentrifugasi Terhadap Motilitas, Daya. Tahan Hidup, dan Tudung Akrosom Spermatozoa Kambing. Veterinaria Medika. Fakultas Kedokteran Hewan. Universitas Airlangga, 3(1), 61-63.

Susilawati, T. 2011. Spermatologi. UB Press: Malang.

Susilawati, T. 2013. Pedoman Inseminasi Buatan Pada Ternak. Malang: UB Press.

Supriatna, 1993. Metode Dasar Dalam Pembekuan Embrio Mamalia. Bogor: IPB

Suyadi, A. Rachmawati dan N. Iswanto. 2012. Pengaruh α-tocopherol yang berbeda dalam pengencer aminomethane-kuning telur terhadap kualitas emen ambing Boer yang disimpan pada suhu 5^0C. Jurnal Ilmu-ilmu Peternakan. 22(3) : 1-8

Tambing. S. N., M.R. Toelihere., T.L. Yusuf., dan I.K. Sutama. 2000. Pengaruh gliserol dalam pengencer tris terhadap kualitas semen beku kambing Peranakan Etawah. J. Ilmu Ternak dan Veteriner.Vol. 5. No. 2: 1-8.

Toelihere, M. R. 1979. Inseminasi Buatan pada Ternak. Bandung: Angkasa.

Toelihere, M.R. 1993. Inseminasi Buatan Pada Ternak. Angkasa. Bandung.

Tvrda, E., Knazicka, Z., Lukacova, J., Schneidgenova, M., Goc, Z., Gren, A., Szabo, C., Massány, P. and Lukac, N. 2013 The impact of lead and cadmium on selected motility, prooxidant and antioxidant parameters of bovine seminal plasma and spermatozoa. J. Environ. Sci. Health A Tox. Hazard Subst. Environ. Eng., 48(10): 1292-1300.

Vishwanath, R. and P. Shannon. 2000. Storage of bovine semen in liquid and frozen state. Anim. Reprod. Sci. 62(1-3):23-53.

Wahyuningsih, A., D.M. Saleh dan Sugiyanto. 2013. Pengaruh Umur Pejantan dan Frekuensi Penampungan Terhadap Volume dan Motilitas Semen Segar Sapi Simmental di Balai Inseminasi Buatan Lembang. Fakultas Peternakan Universitas Jendral Soedirman. Jurnal Ilmiah Peternakan, 1(3):947-953.

WHO. 1999. WHO laboratory manual for the examination of human semen and sperm-cervical mucus interaction. Cambridge university press. England.

Wulandari, Z dan Arief I.I. 2022. Egg powder: nutritional value, functional properties and benefits. Jurnal Ilmu Produksi dan Teknologi Hasil peternakan. Vol 10 (2) : 62 – 68.

Wulandari, Z. 2018. Karakteristik lisozim dari telur unggas lokal sebagai pemanis. Disertasi Sekolah Pascasarjana IPB. Bogor.

LAMPIRAN

Lampiran 1. Hasil Olahan Data SPSS

Setelah Pengenceran

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Motilitas Progresif	P0	5	71.7500	7.18047	3.21120	62.8343	80.6657	63.79	82.90
	P1	5	75.6140	3.75517	1.67936	70.9513	80.2767	70.33	79.98
	P2	5	25.8120	6.15415	2.75222	18.1706	33.4534	19.50	33.83
	Total	15	57.7253	24.03854	6.20672	44.4132	71.0374	19.50	82.90
Viabilitas	P0	5	86.2000	3.96232	1.77200	81.2801	91.1199	81.50	92.50
	P1	5	86.1680	3.23668	1.44749	82.1491	90.1869	83.00	91.00
	P2	5	23.0000	10.14273	4.53597	10.4061	35.5939	14.00	40.50
	Total	15	65.1227	31.42292	8.11336	47.7212	82.5241	14.00	92.50
Abnormalitas	P0	5	14.7780	3.21231	1.43659	10.7894	18.7666	11.50	19.39

	P1	5	13.8000	2.07966	.93005	11.2178	16.3822	11.50	17.00
	P2	5	20.1000	5.23689	2.34201	13.5975	26.6025	13.50	27.50
	Total	15	16.2260	4.49782	1.16133	13.7352	18.7168	11.50	27.50
MPU	P0	5	86.5880	5.70997	2.55357	79.4981	93.6779	78.50	92.50
	P1	5	85.2000	4.64489	2.07726	79.4326	90.9674	79.50	91.50
	P2	5	8.1000	2.88097	1.28841	4.5228	11.6772	3.50	10.00
	Total	15	59.9627	38.19850	9.86281	38.8090	81.1163	3.50	92.50

Anova

		Sum of Squares	df	Mean Square	F	Sig.
Motilitas Progresif	Between Groups	7675.783	2	3837.891	111.207	.000
	Within Groups	414.136	12	34.511		
	Total	8089.919	14			
Viabilitas	Between Groups	13307.395	2	6653.698	154.676	.000
	Within Groups	516.204	12	43.017		
	Total	13823.600	14			
Abnormalitas	Between Groups	114.950	2	57.475	4.099	.044

	Within Groups	168.276	12	14.023		
	Total	283.226	14			
MPU	Between Groups	20177.838	2	10088.919	484.433	.000
	Within Groups	249.915	12	20.826		
	Total	20427.753	14			

Posct Hoc Test

Multiple Comparisons

Dependent Variable		(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Motilitas Progresif	LSD	P0	P1	-3.86400	3.71545	.319	-11.9593	4.2313
			P2	45.93800*	3.71545	.000	37.8427	54.0333
		P1	P0	3.86400	3.71545	.319	-4.2313	11.9593
			P2	49.80200*	3.71545	.000	41.7067	57.8973
		P2	P0	-45.93800*	3.71545	.000	-54.0333	-37.8427
			P1	-49.80200*	3.71545	.000	-57.8973	-41.7067
Viabilitas	LSD	P0	P1	.03200	4.14811	.994	-9.0060	9.0700

			P2	63.20000*	4.14811	.000	54.1620	72.2380
		P1	P0	-.03200	4.14811	.994	-9.0700	9.0060
			P2	63.16800*	4.14811	.000	54.1300	72.2060
		P2	P0	-63.20000*	4.14811	.000	-72.2380	-54.1620
			P1	-63.16800*	4.14811	.000	-72.2060	-54.1300
Abnormalitas	LSD	P0	P1	.97800	2.36837	.687	-4.1822	6.1382
			P2	-5.32200*	2.36837	.044	-10.4822	-.1618
		P1	P0	-.97800	2.36837	.687	-6.1382	4.1822
			P2	-6.30000*	2.36837	.021	-11.4602	-1.1398
		P2	P0	5.32200*	2.36837	.044	.1618	10.4822
			P1	6.30000*	2.36837	.021	1.1398	11.4602
MPU	LSD	P0	P1	1.38800	2.88626	.639	-4.9006	7.6766
			P2	78.48800*	2.88626	.000	72.1994	84.7766
		P1	P0	-1.38800	2.88626	.639	-7.6766	4.9006
			P2	77.10000*	2.88626	.000	70.8114	83.3886
		P2	P0	-78.48800*	2.88626	.000	-84.7766	-72.1994
			P1	-77.10000*	2.88626	.000	-83.3886	-70.8114

Post Thawing

Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Motilitas Progresif	P0	5	33.9000	5.83651	2.61017	26.6530	41.1470	28.95	43.37
	P1	5	34.4520	6.18642	2.76665	26.7705	42.1335	26.35	43.24
	Total	10	34.1760	5.67752	1.79539	30.1145	38.2375	26.35	43.37
Viabilitas	P0	5	32.1000	14.64326	6.54866	13.9180	50.2820	16.00	46.50
	P1	5	27.4000	11.60496	5.18989	12.9905	41.8095	15.00	42.50
	Total	10	29.7500	12.70007	4.01611	20.6649	38.8351	15.00	46.50
Abnormalitas	P0	5	37.4000	5.44748	2.43619	30.6361	44.1639	31.00	45.00
	P1	5	36.8000	15.79003	7.06152	17.1941	56.4059	20.00	53.50
	Total	10	37.1000	11.14002	3.52278	29.1309	45.0691	20.00	53.50
MPU	P0	5	44.2000	6.81542	3.04795	35.7375	52.6625	33.00	49.50
	P1	5	41.7000	14.61421	6.53567	23.5541	59.8459	22.50	60.00

	Total	10	42.9500	10.83064	3.42495	35.2022	50.6978	22.50	60.00

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Motilitas Progresif	Equal variances assumed	.000	.984	-.145	8	.888	-.55200	3.80359	-9.32311	8.21911
	Equal variances not assumed			-.145	7.973	.888	-.55200	3.80359	-9.32827	8.22427
Viabilitas	Equal variances assumed	.777	.404	.562	8	.589	4.70000	8.35584	-14.56859	23.96859

	Equal variances not assumed			.562	7.603	.590	4.70000	8.35584	-14.74504	24.14504
Abnormalitas	Equal variances assumed	6.838	.031	.080	8	.938	.60000	7.46994	-16.62571	17.82571
	Equal variances not assumed			.080	4.939	.939	.60000	7.46994	-18.67380	19.87380
MPU	Equal variances assumed	3.430	.101	.347	8	.738	2.50000	7.21145	-14.12963	19.12963
	Equal variances not assumed			.347	5.661	.741	2.50000	7.21145	-15.40485	20.40485

Lampiran 2. Dokumentasi Penelitian Pengaruh Tepung Kuning Telur Sebagai Pengencer Alternatif Terhadap Kualitas Spermatozoa Sapi Bali

Gambar 1. Proses pengovenan kuning telur

Gambar 2. Proses penyiapan larutan penyangga (*buffer*)

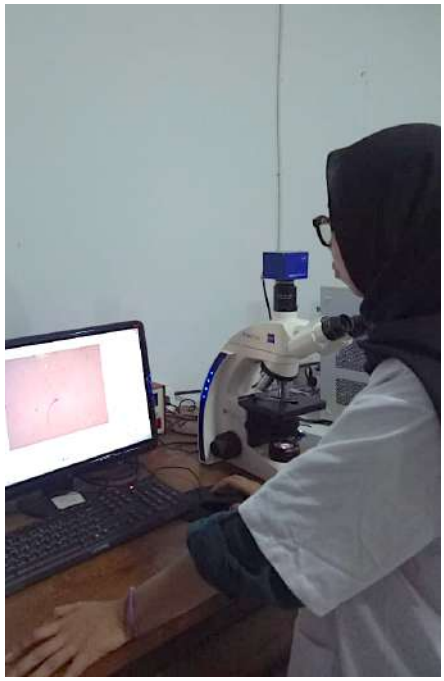
Gambar 3. Proses penepungan kuning telur

Gambar 4. Persediaan nitrogen cair untuk semen beku

Gambar 5. Penyiapan Ternak Jantan untuk penampungan semen

Gambar 6. Proses pengamatan motilitas spermatozoa

Gambar 7. Proses penyiapan sampel perlakuan



Gambar 8. Proses pengamatan Abnormalitas spermatozoa

RIWAYAT HIDUP

Dina Ardiana lahir di Barru pada tanggal 01 Oktober 1997. Ia Adalah Anak tunggal dari pasangan Bapak Suardi (almarhum) dan Ibu Nurhudaya. Jenjang pendidikan formal yang pernah ditempuh adalah SD Inpres Ceppaga, kabupaten Barru, Kecamatan Soppeng Riaja, dan lulus pada tahun 2009, kemudian setelah lulus SD melanjutkan ke SMPN 2 Soppeng Riaja lulus pada tahun 2012, dan melanjutkan sekolah menengah atas di SMAN 2 Barru, Kab. Barru lulus pada tahun 2015, setelah menyelesaikan tingkat SMA. Penulis diterima di Perguruan Tinggi Negeri (PTN) melalui jalur non subsidi (JNS) di Fakultas Peternakan, Universitas Hasanuddin. Selanjutnya penulis melanjutkan pendidikan Magister di Fakultas Peternakan Universitas Hasanuddin, Makassar. Penulis mempunyai visi untuk menjadi seorang ahli yang memimpin dalam peningkatan efisiensi, keberlanjutan, dan inovasi dalam industri peternakan.