DAFTAR PUSTAKA

1. BPOM RI. Formalin. Jakarta: BPOM RI; 2008.
2. IARC (2006). Formaldehyde, 2-butoxyethanol and 1-tert-butoxypropan-2-ol. IARC Monographs on the Evaluation of Carcinogenic Risk to Humans, 88;2006.
3. Zhang L, Freeman LEB, Nakamura J, Hecht S, Vandenberg JJ, Smith MT, et al. Formaldehyde and leukemia: epidemiology, potential mechanism and implications for risk assessment. Environ Mol Mutagen. 2010; 51(3): 181-91.
4. Cosmetic, Toiletry and Fragrance Association (U.S.A). Final report on the safety assessment of formaldehyde. J Am Coll Toxicol. 1984; 3: 157-84.
5. Wijayanti F, Djamil SL, Marfu'ati N. Pengaruh pemberian formalin peroral terhadap kadar ureum dan kreatinin tikus wistar. Jurnal Kedokteran Muhammadiyah. 2015; 2(1): 39-42.
6. Budianto A. Formalin dalam kajian undang-undang kesehatan; undang-undang pangan dan undang-undang perlindungan konsumen formalin in health, food and consumer protection laws studies. Jurnal Legilasi Indonesia. 2011; 8(1): 151-72.
7. Pemerintah Indonesia, 2013. PerKBPOM RI nomor 2 tahun 2013 tentang pengawasan bahan berbahaya yang disalahgunakan dalam pangan. RI.
8. Pemerintah Indonesia, 2012. Permenkes nomor 033 tahun 2012 tentang bahan tambahan pangan. RI.
9. BPOM RI. Laporan tahunan BPOM 2016. Jakarta: BPOM RI; 2017.
10. BPOM RI. Laporan tahunan BPOM 2017. Jakarta: BPOM RI; 2018.
11. BBPOM. Laporan tahunan BBPOM di eePadang 2018. Padang; 2018.
12. Insani M. Identifikasi kandungan formalin pada ikan segar yang dijual di Pasar Gaung dan Pantai Panjang (skripsi). Padang: Fakultas Kedokteran Universitas Andalas; 2019.
13. WHO (Denmark). Air quality guidelines for Europe; second edition. Copanhagen: WHO Regional Office for Europe; 1987.
14. WHO (Swiss). Formaldehyde. Geneva: Environmental Health Criteria; 1989.
15. OSHA (2011). OSHA fact sheet: formaldehyde. Occupational Safety and Health Administration. https://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf - Diakses November 2019.
16. Kulle TJ. Acute odor and irritation response in healthy nonsmokers with formaldehyde exposure. Inhal Toxicol. 1993; 5: 323-32.

17. Vandenplas O, Fievez P, Delwiche JP, Boulanger J, Thimpont J. Persistent asthma following accidental exposure to formaldehyde. Allergy. 2004; 59: 115–6.

18. Hong Z, Tong Z, Shi J. Effects of formaldehyde on respiratory system and pulmonary function of workers. Chinese J Pub Heal. 2007; 23(7): 849–50.

19. Wang W, Wang Q, Zhou Y. Effects of low concentration of formaldehyde on respiratory system and pulmonary function of workers. Chinese J Ind Med. 2000; 13(2): 115–6.

20. Kim KH, Jahan SA, Lee JT. Esposure to formaldehyde and its potential human health hazards. J Environ Sci Health. 2011; 29: 277-99.

21. Mahdi C, Aulaniam. The effect of formaldehyde exposure and yogurt supplementation on profile and character hepar tissue protein of rats (*Rattus norvegicus*). Indo J Chem. 2010; 10(1): 132-37.

22. Salisbury D, Bronas U. Reactive oxygen and nitrogen species: impact on endothelial dysfunction. Nurs Res. 2015; 64(1): 53-66.

23. Brammer JP, Kerecsen L, Maguire M. Effects of vinblastine on malondialdehyde formation, serotonin release and aggregation in human platelets. Eur Pharmacol. 1982; 81: 577-85.

24. Frijhoff J, Winyard PG, Zarkovic N, Davies SS, Stocker R, Cheng D, et al. Clinical relevance of biomarkers of oxidative stress. 2015; 23(14): 1144-70.

25. Aruoma OI. Free radicals, oxidative stress ad antioxidants in human health and disease. J Am Oil Chem Soc. 1998; 75: 199-212.

26. Negre-Salvayre A, Auge N, Ayala V, Basaga H, Boada J, Brenke R, et al. Pathological aspects of lipid peroxidation. Free Radic Res. 2010; 44: 1125-71.

27. Zarkovic N. 4-Hydroxynonenal as a bioactive marker of pathophysiological processes. Mol Aspects Med. 2003; 24: 281-91

28. Golbidi S, Ebadi SA, Laher I. Antioxidants in the treatment of diabetes. Curr Diabetes Rev. 2011; 7(2): 106-25.

29. Zuo L, He F, Sergakis GG, Koozehchian MS, Stimpfl JN, Rong Y, Diaz PT, et al. Interrelated role of cigarette smoking, oxidative stress, and immune response in COPD and corresponding treatments. Am J Physiol Lung Cell Mol Physiol. 2014; 307(3): L205-18.

30. Putri AY, Thaha M. Role of oxidative stress on chronic kidney disease progression. Acta Medica Indones. 2014; 46(3): 244-52.

31. Federico A, Morgillo F, Tucillo C, Ciardiello F, Loguercio C. Chronic inflammation and oxidative stress in human carcinogenesis. Int J Cancer. 2007; 121(11): 2381-6.

32. Baierle M, Nascimento SN, Moro AM, Brucker N,Freitas F, Gauer B, et al. Relationship between inflammation and oxidative stress and cognitive decline in the institutionalized elderly. Oxid Med Cell Longev. 2015; 2015: 1-12.

33. Tucker PS, Dalbo VJ, Han T, Kingsley MI. Clinical and research markers of oxidative stress in chronic kidney disease. Biomarkers. 2013; 18(2): 103-15.

34. Liguori I, Russo G, Curcio F, Bulli G, Aran L, Della-Morte D, et al. Oxidative stress, aging, and diseases. Dovepress. 2018; 13: 757-72.

35. Pramono S. Pengaruh formalin peroral dosis bertingkat selama 12 minggu terhadap gambaran histopatologis hepar tikus wistar (laporan hasil karya tulis ilmiah). Semarang: Fakultas Kedokteran Universitas Diponegoro; 2012.

36. Wibowo M. Pengaruh formalin peroral dosis bertingkat selama 12 minggu terhadap gambaran histopatologis ginjal tikus wistar (laporan hasil karya ilmiah). Semarang: Fakultas Kedokteran Universitas Diponegoro; 2012.

37. IPCS. Formaldehyde. Geneva: World Health Organization, International. Programme on Chemical Safety; 1989.

38. Yu GY, Song XF, Liu Y, Sun ZW. Inhaled formaldehyde induces bone marrow toxicity via oxidative stress on exposed mice. Asian Pac J Cancer. 2014; 15: 5253-57.

39. Romdhoni MF. Pengaruh pemberian formalin peroral terhadap mukosa lambung tikus putih strain wistar (*Rattus novergicus strain wistar*). Jurnal Berkala Ilmiah Kedokteran dan Kesehatan Unimus. 2015; 1(2): 2015.

40. WHO (1989). Environmental health criteria 89: formaldehyde. http://www.inchem.org/documents/ehc/ehc/ehc89.htm#SectionNumber:3.1 – Diakses Oktober 2019.

41. Cederbaum AI. Alcohol metabolism. Clin Liver Dis. 2012; 16: 667-85.

42. Indonesian Commercial Newsletter (2010). Laporan market intelligence industri methanol di Indonesia. PT Data Consult. http://www.datacon.co.id/Gasalam2010Methanol.html - Diakses 29 September 2019.

43. William Bann (2015). Methanol and ethanol: fuel or feedstock?. Tecnon OrbiChem. Pubchem (2019). Methanol. National Center for Biotechnology Information. https://pubchem.ncbi.nlm.nih.gov/compound/887 - Diakses Oktober 2019.

44. Pubchem (2019). Methanol. National Center for Biotechnology Information. https://pubchem.ncbi.nlm.nih.gov/compound/887 - Diakses Oktober 2019.

45. Dorokhov YL, Shindyapina AV, Sheshukova EV, Komarova TV. Metabolic methanol: molecular pathways and physiological roles. Physiol Rev. 2015; 95: 603-31.

46. Caro AA, CCaderbaum AI. Oxidative stress, toxicology, and pharmacology of CYP2E1. Annu Rev Pharmacol Toxicol. 2004; 44: 27-42.

47. Coon MJ, Koop DR. Alcohol-inducible cytochrome P-450 (P-450ALC). Arch Toxicol. 1987; 60: 16-21.
48. Wallage HR, Watterson JH. Formic acid and methanol concentrations in death investigations. J Anal Toxicol. 2008; 32: 241–47
49. Cederbaum AI, Qureshi A. Role of catalase and hydroxyl radicals in the oxidation of methanol by rat liver microsomes. Biochem Pharmacol. 1982; 31: 329-35.
50. Deng X, Deitrich RA. Putative role of brain acetaldehyde in ethanol addiction. Curr Drug Abuse Rev. 2008; 1: 3-8.
51. Harris C, Wang SW, Lauchu JJ, Hansen JM. Methanol metabolism and embryotoxicity in rat and mouse conceptuses: comparisons of alcohol dehydrogenase (ADHI), form-aldehyde dehydrogenase (ADH3), and catalase. Int J Environ Res Health. 2010; 7: 1076-92.
52. MacAllister SL, Choi J, Dedina L, O'Brien PJ. Metabolic mechanisms of methanol/formaldehyde in isolated rat hepatocytes: carbonyl-metabolizing enzymes versus oxidative stress. Chem Biol Interact. 2011; 191: 308-14.
53. Pocker Y, Li H. Kinetics and mechanism of methanol and formaldehyde interconversion and formaldehyde oxidation catalyzed by liver alcohol dehydrogenase. Adv Exp Med Biol. 1991; 284: 315–25.
54. Kraut JA, Kurtz I. Toxic alcohol ingestions: clinical features, diagnosis, and management. Clin J Am Soc Nephrol. 2008; 3: 208-25.
55. Roe O. The metabolism and toxicity of methanol. Pharmacol Rev. 1955; 7: 399-412.
56. Lund A. Excretion of methanol and formic acid in man after methanol consumption. Acta Pharmacol Et Toxicol. 1948; 4: 108-21.
57. Eriksen SP, Kulkarni AB. Methanol in normal human breath. Science. 1963; 141: 639-40.
58. Jones GR, Singer PP, Rittenbach K. The relationship of methanol and formate concentrations in fatalities where methanol is detected. J Forensic Sci. 2007; 52: 1376-82.
59. Kostic MA, Dart RC. Rethinking the toxic methanol level. Clin Toxicol. 2003; 41: 793-800.
60. Leaf G, Zatman LJ. A study of the conditions under which methanol may exert a toxic hazard in industry. Br J Ind Med. 1952; 9: 19-31.
61. Pellizzari E, Hartwell T, Harris BH III, Waddell R, Whitaker D, Erickson M. Purgeable organic compounds in mother's milk. Bull Environ Contam Toxicol. 1982; 28: 322-28.
62. Dorokhov YL, Komarova TV, Petrunia IV, Kosorukov VS, Zinovkin RA, Shindyapina AV, et al. Methanol may function as a cross-kingdom signal. PLoS One. 2012; 7(4): 1-15.

63. Taucher J, Lagg A, Hansel A, Vogel W, Lindinger W. Methanol in human breath. Alcohol Clin Exp Res. 1995; 19: 1147-50.

64. Komarova TV, Sheshukova EV, Dorokhov YL. Cell wall methanol as a signal in plant immunity. Front Plant Sci. 2014; 5: 101.

65. Greizerstein HB. Congener contents of alcoholic beverages. J Stud Alcohol. 1981; 42: 1030-37.

66. Trocho C, Pardo R, Rafecas I, Virgili J, Remesar X, Fernández-López JA, et al. Formaldehyde derived from dietary aspartame binds to tissue components in vivo. Life Sci. 1998; 63: 337-49.

67. Stegink LD, Filer LJ, Bell EF, Ziegeler EE, Tephly TR. Effect of repeated ingestion of aspartame-sweetened beverage on plasma amino acid, blood methanol, and blood formate concentrations in normal adults. Metabolism. 1989; 38: 357-63.

68. Stegink LD, Brummel MC, McMartin K, Martin-Amat G, Filer LJ, Baker GL, et al. Blood methanol concentrations in normal adult subjects administered abuse doses of aspartame. J Toxicol Environ Health. 1981; 7: 281-90.

69. Songur A, Sarsilmaz M, Ozen OA, Sahin S, Koken R, Zararsiz I, et al. The effects of inhaled formaldehyde on oxidant and antioxidant systems of rat cerebellum during the postnatal development process. Toxicol Mech Methods. 2008; 18: 569-74.

70. ATSDR (2008). Public health statement: formaldehyde. https://www.atsdr.cdc.gov/toxprofiles/formaldehyde_fig_1-2.jpg - Diakses November 2019.

71. ATSDR (2014). Formaldehyde. https://www.atsdr.cdc.gov/MHMI/mmg111.pdf – Diakses November 2019.

72. Gardner MJ, Pannett B, Winter PD, Cruddas AM. A cohort study of workers exposed to formaldehyde in the British chemical industry: an update. 1993; 50: 827-34.

73. WHO (Swiss). Concise international chemical assessment document 40: formaldehyde. Geneva: World Health Organization; 2002.

74. Giannini EG, Testa R, Savarino V. Liver enzyme alteration guide for clinicians. CMAJ. 2005; 172(Pt3): 367-74.

75. Ellen C, Ebert MD. Hypoxic liver injury. Mayo Clin Proc J. 2006; 81(9): 1232-36.

76. Guyton A C, Hall J E, editor, Rachman L Y, Hartanto H, Novrianti A, Wulandari N. Buku Ajar Fisiologi Kedokteran.[diterjemahkan oleh irawati, Ramadhani D, Indriyani F, Dany F, Nuryanto I, Riyanti S S P, Resmisari T, Suryono YJ]; 2007.

UNIVERSITAS ANDALAS
UNTUK KEDJAJAAN BANGSA

77. Halliwell B, Gutteridge JMC. Free radicals other reactive species and disease. 3rd ed. Free radicals in Biology and Medicine. Inggris: Oxford University Press; 1999. p. 617-783.

78. Young IS, Woodside JV. Antioxidants in health and disease. J Clin Pathol. 2001; 54: 176-86.

79. Valko M, Leibfritz D, Moncola J, Cronin MT, Mazura M, Telser J. Review free radicals and antioxidants in normal physiological functions and human disease. Int J Biochem Cell Biol. 2007; 39(1): 44-84.

80. Valko M, Rhodes CJ, Monocol J, Izakovic M, Mazur M. Free radicals, metals and antioxidants in oxidative stress-induced cancer. Chem Biol Interact. 2006; 160(1): 1-40.

81. Kukreja RC, Hess ML. The oxygen free-radical system-From equations through membrane-protein interactions to cardiovascular injury and protection. Cardiovascuar Research. 1992; 26: 641-55.

82. Egbuna C, Ifemeje JC. Oxidative Stress and Nutrition. Trp J Appl Nat Sci. 2017; 2(1): 110-16.

83. Droge W. Free radicals in the physiological control of cell function. Review. Physiol Rev. 2002; 82: 47-95.

84. Manisha, Hasan W, Richa R, Jat D (2017). Oxidative stress and antioxidants: an overview. International Journal Advanced and Review. https://www.researchgate.net/publication/319468596_Oxidative_stress_and_antioxidants_an_overview - Diakses September 2019.

85. Nicholls SJ, Hazen SL.. Arterioscler Thromb Vasc Biol. 2005; 25: 1102-11.

86. Pacher P, Beckman JS, Liaudet L. Nitric oxide and peroxynitrite in health and disease. Physiol Rev. 2007; 87: 315-424.

87. Parthasarathy S, Santanam N, Ramachandran S, Meilhac O. Oxidants and antioxidants in atherogenesis: an appraisal. J Lipid Res. 1999; 40: 2143-57.

88. Yun-Zhong F, Sheng Y. and Guoyao, W. Free radicals, antioxidants, and nutrition. Nutrition. 2002; 18: 872–9.

89. Sies H, Jones D. Oxidative stress. In: Fink G, editor. Encyclopedia of stress. 2nd ed. Amsterdam: Academic Press; 2007. p. 45-8.

90. Cadenas E, J.A Davies K. Mitochondrial free radical generation, oxidative stress, and aging. Free Radic Bio Med. 2000; 29: 222-30.

91. Durackova Z. Some current insights into oxidative stress. Physiol Res. 2010; 59: 459-69.

92. Bisht, S. and Sisodia, S.S. Diabetes, dyslipidemia, antioxidant and status of oxidative stress. *IJRAP*. 2010; 1(1): 33-42.

93. Katoor AJ, Pothineni NVK, Palagiri D, Mehta JL. Oxidative stress in atherosclerosis. 2017; 19: 1-11.

94. Halliwell B. Oxidative stress and cancer: have we moved forward?. Biochem J. 2007; 401: 1-11.

95. Domínguez RO, Marschoff ER, Guareschi EM, Repetto MG, Famulari AL, Pagano MA, et al. Insulin, glucose and glycated haemoglobin in Alzheimer's and vascular dementia with and without superimposed type II diabetes mellitus condition. J Neural Transm. 2008; 115: 78-84.

96. Famulari A, Marschoff E, Llesuy S, Kohan S, Serra J, Domínguez R, et al. Antioxidant enzymatic blood profiles associated with risk factor in Alzheimer's and vascular diseases. A predictive assay to differentiate demented subjects and controls. J Neurol Sci. 1996; 141: 69-78.

97. Fiszaman M, D'Eigidio M, Ricart K, Reppeto MG, Llesuy S, Borodinsky L, et al. Evidences of oxidative stress in familial amyloidotic polyneuropathy type 1. Arch Neurol. 2003; 60: 593-97.

98. Farooqui T, Farooqui A. Lipid-mediated oxidative stress and inflammation in the pathogenesis of Parkinson's disease. Parkinsons Dis. 2011,

99. Repetto M, Reides C, Gomez C, Costa M, Griemberg G, Llesuy S. Oxidative stress in erythrocytes of HIV infected patients. Clin Chim Acta. 1996; 255: 107-17.

100. Repetto M, María A, Giordano O, Guzmán J, Guerreiro E, Llesuy S. Protective effect of Artemisia douglasiana Besser extracts on ethanol induced oxidative stress in gastric mucosal injury. J Pham Pharmacol. 2003; 55: 551-57.

101. Repetto MG, Ferrarotti NF, Boveris A. The involvement of transition metal ions on iron-dependent lipid peroxidation. Arch Toxicol. 2010; 84: 255-62.

102. Halliwell B, Gutteridge JMC. Oxygen toxicity, oxygen radicals, transition metals and disease. Biochem J. 1984; 218: 1-14.

103. Sattler SE, Mene-Saffrane L, Farmer EE, Krischke M, Mueller MJ, DellaPenna D. Nonenzymatic lipid peroxidation reprograms gene expression and activates defense marker in Arabidobsis tocopherol-deficient mutants. The Plant Cell. 2006; 18: 3706-20.

104. Czerska M, Mikolajewska K, Zielinski M, Gromadzinska J, Wasowicz W. Today's oxidative stress markers. Med Pr. 2015, 66(3); 3993-405.

105. Singh Z, Karthigesu IP, Singh P, Kaur R. Use of malondialdehyde as a biomarker for assessing oxidative stress in different disease pathologies: a review. Iranian J Publ Health. 2014; 43(3): 7-16.

106. Fauziah PN, Makoen AM, Yuliati T, Widiarsih E. Optimized steps in determination of malondialdehyde (MDA) standards to diagnostic of lipid peroxidation. Padjadjaran J Dent. 2018; 30: 136-9.

107. Ligor M, Olszowy P. Application of medical and analytical methods in Lyme borreliosis monitoring. Anal Bioanal Chem. 2012; 402: 2233-48.

108. Conti M, Morand PC, Levillain, Lemonnier A. Improved fluorometric determination of malonaldehyde. Clin Chem. 1991; 37(7): 1273-75.

109. Sheu JY, Chen PH, Tseng WC, Chen CY, Tsai LY, Huang YL. Spectrophotometric determination of a thiobarbituric acid reactive substance in human hair. Anal sci. 2003;19(6):957-60.

110. Sengupta P. The laboratory rat: relating its age with human's. Int J Prev Med. 2013; 4(6): 624-30.

111. Krinke GJ, editor. The handbook of experimental animals: the laboratory rat. Switzerland: Academic Press; 2000.

112. WHO (Swiss). General guidelines for methodologies on research and evaluation of traditional medicine. Geneva: World Health Organzation; 2000.

113. IRIS (1989). Formaldehyde; CASRN 50-00-0. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0419_summary.pdf - Diakses November 2019

114. Fitria L, Sarto M. Profil hematologi tikus (*Rattus novergicus* Berkenhout, 1769) galur wistar jantan dan betina umur 4, 6, dan 8 minggu. Biogenesis. 2014; 2(2): 94-100.

115. Jawi IM, Suwardika IW, Linawati NM. Pencegahan Gangguan Fungsi Ginjal karena Stress Oksidatif pada Tikus Diabetes dengan Ubi Jalar Ungu. JVeteriner. 2014;15(2):274-80.

116. Momuat LI, Sangi MS, Purwati NP. Pengaruh VCO Mengandung ekstrak wortel terhadap peroksidasi lipid plasma. Jurnal Ilmiah Sains. 2013;11(2):296-301.

117. Placer ZA, Johnson BC, Cushman LL. Estimation of product lipid peroxidation (Malonyl Dialdehyde) in biochemical systems. Anal Biochem. 1966; 16(2): 359.

118. Lin D. Toxicity mechanism of formic acid is directly linked to ROS burst and oxidative damage in yeast *Saccharomyces cerevisiae*. Trans Tech Publications. 2012; 1060-65.

119. Gilbert DL. Fifty years of radical ideas. Ann NY Acad Sci. 2000; 1-14.

120. Saito Y, Nishio K, Yoshida Y, Niki E. Cytotoxic effect of formaldehyde with free radicals via increment of cellular reactive oxygen species. Toxicology. 2005; 210: 235-45.

121. Bouayed J, Bohn T. Exogenous antioxidants-double-edged swords in cellular redox state: health beneficial effects at physiologic doses versus deleterious effects at high doses. Oxid Med Cell Longev. 2010; 3(4): 228-37.

122. Ispir U, Kirici M, Yonar ME, Yonar SM. Response of antioxidant system to formalin in the whole body of rainbow trout, *Onchorhychus mykiss*. Cell Mol Biol. 2017; 13-6.