References

1. Brochocka A, Majchrzycka K. Technology for the production of bioactive melt-blown filtration materials applied to respiratory protective devices. *Fibres and Textiles in Eastern Europe* 2009;76(5): 92-8.
2. Makison Booth C, Clayton M, Crook B, Gawn JM. Effectiveness of surgical masks against influenza bioaerosols. *J Hosp Infect. Elsevier Ltd*; 2013; 84(1): 22-6.
3. Van der Sande M, Teunis P, Sabel R. Professional and home-made face masks reduce exposure to respiratory infections among the general population. *PLoS One* 2008; 3(7): 3-8.
4. Fisher EM, Shaffer RE. Considerations for recommending extended use and limited reuse of filtering facepiece respirators in health care settings. *J Occup Environ Hyg.* 2014; 11(8): D115-28.
5. Majchrzycka K, Gutarowska B, Brochocka A, Brycki B. New filtering antimicrobial nonwovens with various carriers for biocides as respiratory protective materials against bioaerosol. *Int J Occup Saf Ergon*. 2012 Jan;18(3):375-85.
6. Gutarowska B, Brycki B, Majchrzycka K, Brochocka A. New bioactive polymer filtering material composed of nonwoven polypropylene containing alkylammonium microbiocides on a perlite carrier. *Polimery* 2010; 55(7-8): 568-74.
7. Brycki B, Gutarowska B, Majchrzycka K, Brochocka A, Orlikowski W, Krucińska I, et al. Środek biobójczy do wytwarzania włóknin filtracyjnych oraz sposób otrzymywania środka biobójczego do wytwarzania włóknin filtracyjnych. Poland; PL 211878 B1, 2012.
8. Gutarowska B, Stawski D, Skora J, Herczyńska L, Pielech-Przybylska K, Połowiński S, et al. PLA nonwovens modified with poly(dimethylaminoethyl methacrylate) as antimicrobial filter materials for workplaces. *Text Res J.* 2015;85(10):1083-94.
9. Krucińska I, Strzembosz W, Majchrzycka K, Brochocka A, Sulak K. Biodegradable Particle Filtering Half Masks for Respiratory Protection. 2012;(96):77-83.
10. Majchrzycka K, Brochocka A. Modification of biodegradable filtering nonwovens with biocidal agent, in Polish. *Przetwórstwo Tworzyw* 2013; 3(19): 217-22.
11. Brosseau LM, McCullough NV, Vesley D. Bacterial survival on respirator filters and surgical masks. *J Am Biol Saf Assoc.* 1997; 2(3): 32-43.
12. Wang Z, Reponen T, Willke K, Grinshpun SA. Survival of Bacteria on Respirator Filters. *Aerosol Sci Technol.* 1999; 30(3): 300-8.
13. Majchrzycka K, Gutarowska B, Brochocka A. Aspects of tests and assessment of filtering materials used for respiratory protection against bioaerosols. Part I:Type of Active Substance, Contact Time, Microorganism Species. *Int J Occup Saf Ergon.* 2010; 16(2): 263-73.
14. Majchrzycka K, Gutarowska B, Brochocka A. Aspects of tests and assessment of filtering materials used for respiratory protection against bioaerosols. Part II: Sweat in the environment, microorganisms in the form of a bioaerosol. *Int J Occup Saf Ergon.* 2010; 16(2): 275-80.
15. Gutarowska B, Skóra J, Nowak E, Łysiak I. Antimicrobial Activity and Filtration Effectiveness of Nonwovens with Sanitized for Respiratory Protective Equipment. *Fibres and Textiles in Eastern Europe* 2014; 22, 3(105): 120-5.
16. 89/686/EEC. Council Directive of 21 December 1989 on the approximation of the laws of the Member States relating to personal protective equipment. Off J Eur Communities. 1989;L 399:18.
17. Müller DH, Krobjilowski A. Meltblown fabrics from biodegradable polymers. 2001; 10(1): 11-7.

18. Liu Y, Cheng B, Cheng G. Development and Filtration Performance of Polylactic Acid Meltblowns. *Text Res J.* 2010; 80(9): 771-9.
19. Brycki B, Gutarowska B, Majchrzycka K, Brochocka A, Orlikowski W, Krucińska I, Gliścińska E, Krzyżanowski J, Łysiak I. *The biocidal agent for the production of nonwoven and a method of preparing a biocide for the production of nonwoven*. Patent PL 211 878, 2011.
20. Majchrzycka K. Evaluation of a New Bioactive Nonwoven Fabric for Respiratory Protection. Fibres and Textiles in Eastern Europe 2014; 1: 81-8.
21. AATCC Test Method 100-2004. Antibacterial finishes on textile materials: Assessment of. AATCC Technical Manual/2010. 2004.
22. EN 14045:2003 Packaging. Evaluation of the disintegration of packaging materials in practical oriented tests under defined composting conditions.
23. EN 14806:2005 Packaging. Preliminary evaluation of the disintegration of packaging materials under simulated composting conditions in a laboratory scale test.
24. ISO 20200:2004 Plastics – Determination of the degree of disintegration of plastic materials under simulated composting conditions in a laboratory-scale test.
25. PN-EN 143:2000+AC:2002, Sprzęt ochrony układu oddechowego. Filtry. Wymagania, badanie, znakowanie.
26. EN 13274-7:2008 Respiratory protective devices. Methods of test. Determination of particle filter penetration.
27. Ho KLG, Pometto III AL, Hinz PN. Effects of temperature and relative humidity on polylactic acid plastic degradation. *J Envrironmental Polym Degrad.* 1999;7(2):83-92.
28. Brown RC. *Air filtration: An integrated approach to the theory and applications of fibrous filters.* Oxford: Pergamon Press; 1993.
29. Tsai PP, Huang H, Wadsworth LC. Electrostatic Decay of Corona-charged Melt Blown Electret at *Ambient and Elevated Temperatures*. 1999.
30. Majchrzycka K, Okrasa M, Skóra J, Gutarowska B. Evaluation of the Survivability of Microorganisms Deposited on Filtering Respiratory Protective Devices under Varying Conditions of Humidity. *Int J Environ Res Public Health*. 2016; 13(1): 98.
31. Motyl E, Lowkis B. Effect of air humidity on charge decay and lifetime of PP electret nonwovens. *Fibres and Textiles in Eastern Europe* 2006; 14(5): 59.
32. Xiao L, Wang B, Yang G, Gauthier M. Poly (Lactic Acid) – Based Biomaterials: Synthesis, Modification and Applications. In: Ghista DN, editor. iomedical Science. *Engineering and Technology*. 2012. p. 249-83. 94