

References

1. Karwowska E, Sztompka E, Łebkowska M, Miałkiewicz-Pęska E. Viability of bacteria in fiber filters as a result of filter humidity. *Polish Journal of Environmental Studies* 2003; 12(1): 57-61.
2. Kemp P, Murray F, Lysek G, Neumeister-Kemp HG. Survival and growth of micro-organisms on air filtration media during initial loading. *Atmospheric Environment* 2001; 35: 4739-4749.
3. Krakowiak P, Żakowska Z. Impact of air humidity on viability of bacteria in polyester fiber filters. *Przegląd Włókienniczy. Włókno, Odzież, Skóra* 2013; 3: 29-32.
4. Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market, OJEC L12 3.
5. Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products, OJEC L 167/1.
6. *Antimicrobial Resistance and Implications for the 21st Century*. Eds. Fong IW, Drlica K. Springer, New York, 2008.
7. Bolduc N. *Microbial air filter*. Patent US20030205137 A1, USA, 2001.
8. Messier PJ, Ohayon D. *Nontoxic antimicrobial filters containing triclosan*. Patent US20090277450 A1, USA, 2009.
9. Messier PJ. *Facemask with filtering closure*. Patent US8091551 B2, USA, 2012.
10. Gutarowska B, Skóra J, Nowak E, Łysiak I, Wdówka M. Antimicrobial activity and filtration effectiveness of nonwovens with Sanitized for respiratory protective equipment. *Fibres & Textile in Easter Europe* 2014; 22, 3(105): 120-125.
11. Majchrzycka K, Gutarowska B, Brochocka A, Brycki B. New filtering antimicrobial nonwovens with various carriers for biocides as respiratory protective materials against bioaerosol. *JOSE* 2012; 18 (3): 375-385.
12. Brycki B, Gutarowska B, Majchrzycka K, Brochocka A, Orlikowski W, Krucińska I, Gliścińska E, Krzyżanowski J, Łysiak I. *The biocidal agent in the manufacture of nonwoven filter and a method for preparing a biocidal agent in the manufacture of nonwoven filtration*. Patent 211878, PL, 2009
13. Brochocka A, Majchrzycka K. Technology for the Production of Bioactive Melt-blown Filtration Materials Applied to Respiratory Protective Devices. *Fibres & Textiles in Eastern Europe* 2009; 5(76): 92-98.
14. Majchrzycka K, Brochocka A, Orlikowski, Krucińska I, Gliścińska E, Krzyżanowski J, Łysiak I, Brycki B, Gutarowska B. *Melt-blown nonwoven electrets*. Patent, PL, 2009.
15. Majchrzycka K, Brochocka A. Modification of biodegradable filtering nonwovens with a biocidal agent. *Przetwórstwo Tworzyw* 2013; 3 (153): 217-222.

16. Vargas-Villagran H, Teran-Salgado E, Dominguez-Diaz M, Flores O, Campillo B, Flores A, Romo-Uribe A. Non-woven membranes electrospun from polylactic acid incorporating silver nanoparticles as biocide. In: *2011 - Symposium S11 – Biomaterials for Medical*. MRS Proceedings Vol.1376 – IMRC. (ed. Rodil S, Almaguer A, Anselme K), Cancun, Mexico, 14-19, April 2011, pp. 78-84, Cambridge University Press.
17. Dasari A, Quirós J, Herrero B, Boltes K, García-Calvo E, Rosal R. Antifouling membranes prepared by electrospinning polylactic acid-containing biocidal nanoparticles. *Journal of Membrane Science* 2012; 405–406: 134-140.
18. Cerkez I, Worley SD, Broughton RM, Huang TS. Rechargeable antimicrobial coatings for poly(lactic acid) nonwoven fabrics. *Polymer* 2013; 54 (2): 536-541.
19. Krucińska I, Strzembosz W, Majchrzycka K, Brochocka A, Sulak K. Biodegradable Particle Filtering Half Masks for Respiratory Protection. *Fibres & Textiles in Eastern Europe* 2012; 6B (96): 77-83.
20. Majchrzycka K. Evaluation of a new bioactive nonwoven for respiratory protection, *Fibres & Textile in Easter Europe* 2014; 22, 1(103): 81-88.
21. Brycki B, Majchrzycka K, Brochocka A, Orlikowski W. *The biocidal agent to modify the nonwoven filter made of biodegradable polymers and a method for preparing an agent for the modification of nonwoven filter made of biodegradable polymers*. Patent application P. 406794, PL, 2013.
22. EN 143:2000/A1/2006 Respiratory protective devices – Particle filters - Requirements, testing, marking.
23. EN 149:2001+A1: 2009 Respiratory protective devices – Filtering half mask - Requirements, testing, marking.
24. European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste, L 365/10 from 31 December 1994.
25. EN 13432:2000 Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging.
26. PN-EN 1276:2000/Ap1:2001 Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic and institutional areas (Phase 2, step 1) Test methods and requirements.