

Name: Åge Oterhals

Present position Senior scientist
Work address Nofima, Kjerreidviken 16, N-5141 Fyllingsdalen, Norway
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Degrees

1982 Civil engineer (MSc) in chemistry and biotechnology

Experience

2007- PhD-student, Department of Physics and Technology, University of Bergen.
Title: Decontamination of persistent organic pollutants in fishmeal and fish oil.
2008- Senior scientist, Nofima Ingrediens.
2002-2007 Senior scientist, Fiskeriforskning.
1998-2002 R&D Manager, SSF (Norwegian Herring Oil and Meal Industry Research institute).
1988-1998 Scientist, SSF (Norwegian Herring Oil and Meal Industry Research institute).
1985-1988 Scientist, SINTEF, Department of Biotechnology.
1983-1985 Product developer, Collett-Marwell Hauge AS.
1983-1983 Research assistant, NTH, Department of Marine Biochemistry.

Present research activities and fields of interest

- Reduction of persistent organic pollutants in food and feed ingredients
- Lipid technology and quality (extraction, fractionation, refining and stabilization)
- Feed technology (physical and chemical properties of feed ingredients related to the extrusion process and pellet quality)
- Process development and optimization

Memberships in academic and professional committees/networks

2003-2004 Deputy member board of Fiskeriforskning
1999-2001 Member IFFO Technical Committee and leader of the Processing Working Group
1999-2000 Member Bransjeforskningens Kontaktforum (BRAKO)
1997-1998 Member board of SSF
1995-1996 Deputy member board of SSF

Selected publications

Peer-reviewed journals

- 2008 Oterhals, Å., Nygård, E. Reduction of dioxin and PCB in fish meal: A feasibility study. *J. Agric. Food Chem.* 2007, **56**, 2012-2020.
- 2007 Oterhals, Å., Solvang, M., Nortvedt, R., Berntssen, M.H.G. Optimization of activated carbon-based decontamination of fish oil by response surface methodology. *Eur. J. Lipid Sci. Technol.* 2006, **109**, 691-705.

Conference papers

- 2006 Berntssen, M.H.G., Oterhals, Å., Lie, Ø., Lundebye, A.-K. Tailoring farmed Atlantic salmon with lower levels of persistent organic pollutants. *Organohalogen Compounds.* 2006, **68**, 624-627.
- 2001 Oterhals, Å. 2001. Effect of proteolytic enzyme inhibitor addition on energy consumption in the fishmeal process. Proc. 1st Nordic Drying Conference, Trondheim, Norway.

Patents

- 2001 Samuelsen, T.A., Oterhals, Å. Pulverformet proteinmateriale med bindeegenskaper tilpasset anvendelse som proteinkilde og bindemiddel i formulert fôr. NO 309702.
- 1996 Oterhals, Å. Fremgangsmåte til utvinning av fiskeolje fra fet fisk, og anvendelse av oljen i næringsmidler. NO 943424.

Selected presentations

- 2009 Oterhals, Å., Berntssen, M.H.G. Reduction of persistent organic pollutants in fish oil by short path distillation – Process optimization and effect on oil quality. 7th Euro Fed Lipid Congress, 18-21 October 2009, Graz, Austria.
- 2008 Oterhals, Å., Haugsgjerd, B.O., Wang-Andersen, J., 2008. Ekstraksjon av marine fosfolipider. Biomarint Industriseminar, 2-3 September 2008, Bergen, Norway.
- 2007 Oterhals, Å. Decontamination of fishmeal and fish oil – alternative technologies and challenges. Aquafeed Horizons, 9-10 May 2007, Utrecht, The Netherlands.
- 2007 Oterhals, Å. Reduction of persistent organic pollutants in fish oil. UIC seminar on short path and thin film distillation, 22 March 2007, Bergen, Norway.
- 2006 Oterhals, Å., Samuelsen, T.A. Effekt av konsentrattnivå på fysikalske og kjemiske egenskaper til fiskemel basert på kolmule. Havbruk 2006, Bergen 29-31 March 2006.
- 2005 Oterhals, Å., Berntssen, M.H.G., Solvang, M., Nortvedt, R. Decontamination of fish oil by activated carbon adsorption. 23rd Nordic Lipid Symposium, 1-4 June 2005, Reykjavik, Iceland.
- 2004 Oterhals, Å. Reduction of persistent organic pollutants in fish oil and fish meal - Technical possibilities and perspectives. Workshop on The Possibilities of Decontamination of Fish Oil and Fishmeal for Dioxins, PCBs and other Persistent Organochlorine Compounds. European Commission, DG SANCO, Unit D3: Chemical and Physical Risks Surveillance, 3 September 2004, Brussels, Belgium.