Processing (PRO) Interest Area

Tentative Technical Program
As of February 12, 2020

This presentation list is not final and is subject to change.

The presenter is the first author, or the author indicted with an asterisk (*).

Monday Morning – April 27, 2020

PRO 1a: Processing ABC's Part I (from seed processing to crude oil)
Session Chairpersons: William Younggreen, Alfa Laval Inc., USA; and Richard Barton, N. Hunt Moore & Associates, USA

Normal restrictions on the use of product trade names and logos are suspended, so that presenters can freely discuss commercial aspects and opportunities of their products.

Pilot Plant Concept “EthaNa” for ethanolic mild extraction of dehulled canola seed. Agnes Pior*¹, Gunter Börner², Fabian Steffler³, and Florian Sajontz⁴, ¹B+B Engineering, Germany; ²B+B Engineering GmbH, Germany; ³Fraunhofer CBP, Germany; ⁴AVA - Anhaltinische Verfahrens-und Anlagentechnik

Hexan free mechanical extraction by screw pressing as a viable alternative to chemical extraction of oil seeds. Michal Kaválek*¹, and Vladimír Plachý², ¹Farmet a.s., Czech Republic; ²czech, Czech Republic

Technical Trends in Extraction and Refining. Matthew Williamson*, ADF Engineering, USA

Proper Preparation Prevents.... William C. Morphew*¹, and Bruce MacKinnon², ¹Crown Iron Works, USA; ²Crown Iron Works, USA

Cracking and Flaking of Oilseed. Robin Schneider*, Buhler Inc., USA

The minimum Oil Residual is the right Choice. Anibal Demarco*, Desmet Ballestra, Argentina

PRO 1b: Processing ABC's Part II (from crude oil to refined products)
Session Chairpersons: Darren Litle, Arisdyne Systems, Inc., USA; and John Mulholland, N. Hunt Moore & Associates, USA

Normal restrictions on the use of product trade names and logos are suspended, so that presenters can freely discuss commercial aspects and opportunities of their products.
Bleaching of Soybean Oil by using Egg Shell Powder. Elena Abdi¹, Maryam Gharachorloo*², and Mehrdad Ghavami³, ¹MSc Student of the Department of Food Science and Technology, Science and Research Branch, Islamic Azad University, Iran; ²Associate Professor of the Department of Food Science and Technology, Science and Research Branch, Islamic Azad University, Iran; ³Islamic Azad University, Science and Research Branch, Tehran, Iran

Improving product quality and purity by use of enzyme technologies. Hans Christian Holm*¹, , Anders Rancke-Madsen², Morten Moldrup², and Per Munk Nielsen¹, ¹Novozymes A/S, Denmark; ²Novozymes, Denmark

Electrostatic Conditioning of Vegetable Oil. Li Zhou*¹, Venkatesh Meda², and Martin Reaney³, ¹University of Saskatchewan, Canada; ²Department of Chemical and Biological Engineering, University of Saskatchewan, Canada; ³Department of Plant Sciences, University of Saskatchewan, Canada


Monetization of Soapstock in Oil Refineries. Rusty Sutterlin*¹, Ryan Long², and Etienne Sturm³, ¹Inventure Renewables, USA; ²Inventure Renewables, Inc, USA; ³Air Liquide Engineering & Construction, USA

Production of specialty fats through fractionation and enzymatic interesterification. Gijs Calliauw, Marc J. Kellens, and Véronique Gibon*, Desmet Ballestra Group, Belgium

Monday Afternoon – April 27, 2020

PRO 2: Contaminants
Session Chairpersons: Uwe Nienaber, DSM Nutritional Products, USA; and Veronique Barhet, Canadian Grain Commission, Canada

MOSH/MOAH - Mineral Oil Residues in Foods: a New Hot Topic in the EU. Jan Kuhlmann*, SGS Germany GmbH, Germany

Progress in Understanding the Occurrence and Mitigation of 3-MCPD and Glycidyl Ester in Edible Oils over the Last 14 Years. Bertrand Matthäus*, Max-Rubner-Institut, Germany

Mitigation of Glycidyl Esters in Mono- and Diglycerides. Lars Preuss Nielsen¹, Jens Frambøl¹, Tommy Andersen¹, Andrea Höhnke, Elisa Ilsøe¹, and Claus H. Christensen*², ¹Nexus A/S; ²PALSGAARD, DK

Effects of Adsorption on PAHs, Lipid Composition, Oxidation Stability, and Antioxidant Capacity of Flavor Sesame Oil. Longkai Shi*, Ruijie Liu, Ming Chang, Qingzhe Jin, and Xingguo Wang, Jiangnan University, China

Mineral Oil Hydrocarbons: Edible oil industry in the field of tension between mitigation, high analytical deviations of mineral oil determination, potential toxicology and discussion on maximum residue levels. Fernando Campos*, ADM Research, Germany

Reducing Glycidyl Esters in Edible Oil with Silica. Chelsea L. Grimes*, WR Grace, USA
Tuesday Afternoon – April 28, 2020

PRO 3a: Food Safety and Innovative Processing
Chairs: Nurhan Dunford, Oklahoma State University, USA; and Usha Thiyam-Holländer, University of Manitoba, Canada

An Overview of Oil Contaminants. Alan R. Paine*, Desmet Ballestra, Belgium

Food Safety Modernization and the Impact to the Ingredient Industry. Ken Popham*1, and Sarah M. Polo2, 1Process Plus, USA; 2Plus Group, USA

FSMA: Equipment, Cleaning and Sanitization Requirements Within the Food and Beverage Industry. Dennis McCullough*1, and Sarah M. Polo2, 1Process Plus, USA; 2Plus Group, USA

Reducing Glycidyl Esters in Edible Oil with Silica. Chelsea L. Grimes*, WR Grace, USA

Identification of the Key Bitter Off-taste Compounds in Rapeseed Protein Isolates. Christoph Hald*1, Corinna Dawid2, Ralf-Peter Tressel3, and Thomas Hofmann2, 1Technical University Munich, Germany; 2Technical University Munich, Germany; 3Pilot Pflanzenöltechnologie Magdeburg e.V., Germany

Novel Non-Expensive Physical Method to Produce Oils with Zero Free Fatty Acids. Nissim Garti*, LDS, ISRAEL

Game Changer for Oil Stripping Technology. Matthew Ducharme*, Crown Iron Works, USA

Improvements in the Use of Silica Technology in the Edible Oil Refining Processes. John P. McNichol*1, and Jim Moran2, 1PQ Corporation, USA; 2PQ Corporation, USA

Innovation in production of γ-Decalactone - a peach flavor – from Castor oil: microbial fermentation and first Steps of Downstream-processing. Juergen Rabenhorst*1, Alexander Hermann, and Tobias Kempf2, 1Ostwestfalen-Lippe University of Applied Sciences, Germany; 2RWTH Aachen, Germany

Wednesday Morning – April 29, 2020

ANA 3c/ PRO 3b: High Oleic and Omega-3 Canola Oils
Chairs: Lisa Clement, Cargill Inc., USA; and Martin Reaney, Department of Plant Sciences, University of Saskatchewan, Canada

Effect of Oil Types and Frying Cycles on Flavor Compounds of French Fries during Deep-frying. Lirong Xu*, Jiangnan University, China

Rapid Analysis of Intact Canola Seeds using a Handheld NIR-spectrometer. Veronique J. Barthe†*, Michael W.P Petryk, and Bert Siemens, Canadian Grain Commission, Canada
IOP 4/PRO 4: Biofuels

Session Chairpersons: Robert Dunn, USDA, ARS, NCAUR, USA; and Bruce Patsey, Oil-Dri Corporation of America, USA

**Full enzymatic catalyzed biodiesel process.** Anders Rancke-Madsen¹, Morten Moldrup¹, Hans Christian Holm², and Per Munk Nielsen². ¹Novozymes, Denmark; ²Novozymes A/S, Denmark

**The Use of Controlled Flow Cavitation (CFC™) to Enhance Biofuel Processing.** Darren J. Litle*, Arisdyne Systems, Inc., USA

**Adsorptive Removal of Contaminants from Fats and Oils for Production of BioFuels.** Brian S. Cooke*, Clariant, USA

**Compositional and Physicochemical Properties of Deposits Formed from Commercial Biodiesel Fuels.** Richard W. Heiden*¹, Sigurd Schober², and Martin Mittelbach². ¹R.W. Heiden Associates, LLC, USA; ²Institute of Chemistry, University of Graz, Austria

**Enzymatic Conversion of Sludge Palm Oil to Biodiesel for Sustainable Energy Production in Remote Areas.** Eng Seng Chan*¹, Jun Mann Loh², and Cher-Pin Song². ¹Monash-Industry Palm Oil Research Platform, Monash University Malaysia, Malaysia; ²Monash.Industry Palm Oil Research Platform, Monash University Malaysia, Malaysia

**Correlation of Biodiesel Cold Flow Properties Using the Long-chain Saturation Factor.** Robert O. Dunn*, USDA, ARS, NCAUR, USA

**Oil Recovery from Spent Adsorbent in Renewable Diesel Pretreatment.** Alex Slichter*, Crown Iron Works, USA

**Processing Technologies For Pretreatment of HVO/HEFA Feedstocks.** Wim De Greyt¹, Antonios Papastergiadis², and Bogumila Wozniak³. ¹Desmet Ballestra, Belgium; ²Desmet Ballestra; ³Desmet Ballestra Engineering, Belgium

**Gums: Alternative treatment to add value to that stream.** Anibal Demarco*, Desmet Ballestra, Argentina

**Fuels and Coproducts from Brassica Carinata Oil.** Jocelyn M. Goodwin*, and Ed M. Coppola, Applied Research Associates, USA

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PRO 4.1: General Processing

Session Chairpersons: Mohammad Alam, Texas A&M University, USA; and Richard Clough, Texas A&M University, USA

**Refinery Performance Tests and the Missing Plutonium.** Alan R. Paine*, Desmet Ballestra, Belgium

**Industry 4.0 Implementation within Automation Modernization Including Automatic Batch Processing.** John Glenski¹, and Sarah M. Polo². ¹Automation Plus, USA; ²Plus Group, USA

**Last improvements in Seed Preparation Process.** Anibal Demarco*, Desmet Ballestra, Argentina
Hexane Distillation News. Anibal Demarco*, Desmet Ballestra, Argentina

Advances in the Solvent Extraction of Canola. Adolfo T. Subieta*, Desmet Ballestra North America Inc., USA

Multi-stage Deacidification & Deodorization for online fractionation of Free Fatty acids from high FFA oil feedstock like Palm, Coconut and Palm Kernel oil. Dnyanoba Chame*, DVC Process Technologists, INDIA

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PRO-P: Processing Poster Session

Poster Session Chairpersons: Alan Paine, Desmet Ballestra, Belgium; and Olamide Fadairo, University of Manitoba, Canada

Posters will be available for viewing from Sunday, April 26 at 5:30 p.m. until Wednesday, April 29, at 10:30 a.m.

Dedicated Poster Sessions with Authors Present

Monday, April 27 5:30–6:30 p.m.
Tuesday, April 28 5:30–6:30 p.m.

RapidOxy 100: An Innovative Solvent-Free Pre-Treatment to Assess Phenolic Compounds from Mustard and Canola Meal. Ruchira Nandasiri*¹, Michael Eskin¹, Matthew Taron², and Usha Thiham-Holländer¹, ²University of Manitoba, Canada; ³Anton Paar Canada Inc, Canada

Understanding cottonseed hull fracture resistance and its relationship to current cottonseed quality issues. Christopher D. Delhom¹, and Michael K. Dowd*², ¹Southern Regional Research Center, ARS, USDA; ²SRRC-ARS-USDA, USA

The effect of shear-crystallization on fat crystallization of blends of palm oil and anhydrous milk fat. Viet Nguyen¹, Tom Rimaux², Vinh Truong³, Koen Dewettinck⁴, and Filip Van Bockstaele*¹, ²Ghent University, Belgium; ³Vandemoortele R&D Centre, Belgium; ⁴Nong Lam University, Vietnam; ⁴University of Gent, Belgium