GOED Technical Committee - Minutes

Date: November 14, 2024

PRESENT (please let us know if you were present, but not listed below)

Jenna Ritter (*chair* – Nature's Way of Canada)
Guowen Yang (Kinomega)
Simone Staiger (Eurofins)
Fernando Miranda del Solar (Austral Group)
Linda Saga (Eqology)
Lilian Thiaux (Olvea)
Tim Johanek (Carlson Laboratories)
Tony Bimbo (International Fisheries)
Ingjerd Lystad (Pharma Marine)
Lina Cekaite (Aker Biomarine)
Dimitri Sclabos (Tharos)
Juergen Gierke (BASF)
Luke McPherson (Mara Renewables)
Gerhard Kohn (Vesteraalens)
Jorge Sepulveda (Innocon)
Anthony Bible (Wiley Companies)
Henriette Meiser-Zessner (KD Pharma)
Nils Billecke (Cargill)
Geir Frode Olsen (Epax Norway/Pelagia)
Alfonso Prado-Cabrero (Ingredients Certified)
Christine Krumbholz (KD Pharma)
Jennifer May (dsm-firmenich)
Kelly Han (Ingredients Certified)
Sonia Casanova (Copeinca)
Gladys Cchuantico (Copeinca)
Stig Jansson (Grøntvedt)
Jonathan Cortes Linero (Naturmega)
Lars Dalheim (NOFIMA)
Eline Verbaanderd (Friesland Campina)
Osvaldo Barazza (Naturmega)
Rafa Gracia (Solutex)
Mohamed Koroma (Pharmavite)
Haraldur Sigurjónsson (Lysi)
Helen Albans (Croda)
Cecilia Kokkinou (EuroCaps)
Davina Nagington (Croda)
Meagan Eggebeen (Amway)
Bryan Talus (Scoular)
Johannes Kraft (Evonik)
Agata Szygula (TASA)
Sunil Choudhary (OmegaBrite)
Katrina Bartley (Nutrasource)
Huw Watkins (EuroCaps)
Yutong Wang (Nutrasource/SGS)
Keith Persons (Eurofins)
Boriana Bejova (HuveNutra)
Céline Segard (Fermentalg)
Marita Buarø (GC Rieber/Vivomega)

GOED Staff:
Gerard Bannenberg (GOED)
Gaby Cortez (GOED)
Harry Rice (GOED)
Ellen Schutt (GOED)

Guests: -

Absented:
Viorel Marculescu (MBP Solutions)
Claus-Michael Brieber (Henry Lamotte Oils)
Chris Gearheart (GOED)
Craig Mallon (dsm-firmenich)
Michelle Stout (Amway)
Ilke Balci (EasyVit)
Vicky Lin (GOED)
Tina Vestland (Golden Omega)
Jessica Adams (Nu-Mega)
Bas Arntz (Novosana)

Claus-Michael Brieber (Henry Lamotte)

Invitees for this call:
Harm Moes (Da Vinci Laboratory Solutions, The Netherlands)
Terje Aasoldsen (SAMSI, Norway)

Approval of Agenda and Minutes (Jenna Ritter - committee chair)

- Any comments on the minutes of the last meeting?
  - *No comments.* The minutes of the last meeting were approved.
- The agenda and meeting documentation were sent out on November 12th, 2024. Any additions or changes?
  - The agenda was approved.

New Technical Committee Members (Jenna Ritter)

- **New members of the Technical Committee**

  - **Céline Segard (Fermentalg) –** *not present*
  - **Jennifer May (dsm-firmenich) –** I am a senior scientist at dsm-firmenich, located in Nova Scotia, Canada. I have over 20 years' experience in marine and algal omega-3s, supporting a wide range of projects – product development, manufacturing, process improvement - mainly through analytical method development. I am really looking forward to working with the team.
  - **Nils Billecke (Cargill) –** I am senior nutrition scientist at Cargill. I have been here for the past 9 years. I am located at the R&D center in Belgium. I am standing in for Pedro Sá Gomes, who was a member of this committee before me. I am focusing on fats and oils in nutrition primarily, but also working with product development and production sites and supply chain.
  - **Eline Verbaanderd (Friesland Campina) –** I am a product developer at Friesland Campina, at the division where we make DHA and ARA encapsulates and powders, mostly for infant formula.
  - **Kelly Han (Supplement Certified) –** I work at Supplements Certified, and we just joined GOED. We are very excited to be here. I am the business director and will just attend the meeting to see the relevance and to meet people. If I can't contribute, I might focus on other committees. But today I am just interested in hearing all the discussions.
  - **Alfonso Prado-Cabrero (Supplement Certified) –** Hello everyone. I work with Kelly in Supplement certified. We are based in Waterford, Ireland. We are dedicated to quantifying omega-3 fatty acids in dietary supplements. We also quantify carotenoids. We are happy to join this committee.

- **Jessica Adams (Nu-Mega) –** *absented and left introduction to be read* – I am the Innovation Manager at Nu-mega Ingredients, which specialized in microencapsulated omega-3 and omega-6 powders. She has been with the company for 7 years and holds an MBA and M.Sc. in food science.

- **Members who have left the committee:**
  - **Chloé Lhomme (Fermentalg) –** Thanks to Chloé, for all her contributions to this committee.

Monograph/Pharmacopeia Updates (Gerard Bannenberg - GOED)

- **General comment about committee invitation sharing (Gerard)**

  - **Gerard Bannenberg (GOED) –** Just a short housekeeping comment. This committee has been growing a lot and has reached 125 members now. We have been noting in the past few meetings that people sometimes extend the meeting invitation to other colleagues. It becomes a little confusing because we get people on the calls that we don't know. So, please don't do that and instead inform Jenna or me before the meeting that you would like to have a colleague present on the call, and we send them an invitation directly. Thank you.

- **MOH regulations update (Lilian Thiaux, Olvea)**

  - **Lilian Thiaux (Olvea) –** I like to present you with the latest discussion we are having with European sector associations we are working with, for instance with FEDIOL, which is the European association for vegetable oils and protein meals.
  - The first point is that the EU regulation on MOAH is still expected to be published in the first half of 2025, but new discussions are still pending, for instance regarding interference issues in testing. So, potentially its implementation could be applicable after January 1, 2026. This remains to be confirmed. Discussions are still ongoing, and the application of the final text could be slightly postponed.
  - It is now confirmed that with respect to EU Regulation 333/2007, it will include MOAH very soon. The updated text is expected before the end of 2024. It will permit authorities to subtract measurement uncertainties from testing results. For instance, it will be a tool for European authorities to interpret testing results of materials. For example, if we have a max limit of 10 ppm, and a batch is tested with a total MOAH of 13 ppm ± 4, the batch would be considered as conform, technically.
  - Associations like FoodDrinkEurope and FEDIOL, are wondering about FBO's self-monitoring analyses interpretation? FBOs are Food Business Operators, that is the food

industry. Some are pushing, of course, to get the same flexibility to interpret MOSH and MOAH testing results, for example the subtraction of uncertainties for autocontrols. This is being discussed and is not yet confirmed.

- The dark side of regulation EU 333/2007 (*EU regulation for sampling and analysis of contaminants in food*), is that in certain cases the inclusion of MOSH and MOAH could lead to a situation that it will become mandatory for operators, may be, to follow certain sampling instructions. This could be quite difficult to follow in real-life situations. This point is under discussion right now. For example, there could be constraints to sample big bulk batches.
- There are a lot of discussions now about maximum limits (ML) for crude oils. Are thresholds for MOSH and an ML expected for MOAH? Many countries are discussing this. The French position is that MOAH limits should not apply to crude oils intended for refining. In this case, operators may need to prove they can meet MRLs post-refining. It is not at all the overall position – the European Commission prefers to maintain a maximum limit for crude oils imported into Europe.
- Regarding additives, there were discussions a couple of months ago about setting a ML for MOSH and MOAH in omega-3 oils and other food products. The EC circulated a draft proposing a 2 mg/kg limit for additives to ensure uniformity throughout the supply chain. For additives, because of the interference issues (for example with tocopherols), sector associations have raised many concerns with the EC. This draft is actually no longer available on comitology registers, and no further updates have been provided on its status. This means, at this moment, the possibility to regulate MLs for MOSH and MOAH for additives are not anymore relevant at this stage.
- Regarding MOSH, there are no expected upcoming MLs in Europe at this stage. But there are recommendations. The recommendation is max 15 mg/kg as proposed by the EC. But sector associations like FEDIOL have suggested different limits for the recommendations: 20 mg/kg for sunflower, rapeseed, linseed, corn, and soybean oils, as well as blends of these oils. And 50 mg/kg for oils not listed in the first category. At this stage, it is not certain at all if this could be accepted. For now, the most likely outcome is the 15 mg/kg recommendation. Note that this is not a constraint but a recommendation; a product exceeding 15 mg/kg can be sold on the European market. But certain EU countries are talking about the fact that MOSH levels are also elevated and could be regulated soon. There are food safety concerns for women, so maybe it is a reasonable to set in place some withdrawal measures in certain extreme cases. For instance, the French position is the following: they would tolerate up to twice the recommended threshold. So, up to 30 mg/kg MOSH, there won't be any problem selling any food product on the market. But exceeding 30 mg/kg would not be possible anymore, and the product would be recalled or withdrawn. Other countries are discussing other proposals. It can be quite complicated to follow because of the need for potential EU harmonization. Some sectors associations are pushing for a unified standard based on the French model regarding MOSH testing results interpretation. This is just being discussed,

and it is not at all certain if there will be any European harmonization on this topic for MOSH.

- **Gerard** – Feel free to reach out to Lilian if you have any question about these ongoing discussions.

- **USP EPA-EE Certified Reference Standard (Gerard)**

  - **Gerard –** Earlier this year, we discussed some reported issues with the new USP EPA-EE Certified Reference Standard (CRS; batch R181T0 - link) that was made available at the beginning of 2024, and which will replace the CRS (batch R085T0) that is valid until the end of this year. Two GOED members, KD Pharma and BASF, have reported that using the new standard leads to lower measured levels of EPA in their products compared to using the old one. After in-depth evaluations over the past six months at their laboratories, it appears that the purity of the new standard is even higher than its nominal value (99.4%), and that some ampoule-to-ampoule variation may exist. GOED has submitted a letter to the USP at the end of October to outline the issues (*copy of the letter shown on screen*).
    Today, I would like to ask if any other companies have experienced issues with the new standard? Please reach out to me, if you have. If you would like to read the letter, please contact me. If informative, in the next meeting I could also inform you about the reply from USP.

- **Organoarsenic testing (Gerard)**

  - **Gerard –** We have recently discussed EFSA's new Scientific Opinion on small organoarsenic species in food (link). As you know, arsenic can be present as inorganic arsenic, a limit for which we ask GOED members to adhere to following the GOED Monograph, but also as organic forms. The two main ones are monomethyl arsonic acid (MMA(V)) and dimethyl arsinic acid (DMA(V)). The Scientific Opinion concludes that there is some health concern with regard to DMA(V), and consumer exposure comes mainly from the consumption of fish meat, processed preserved fish, mussels and brown rice. Since these small organic forms of arsenic are soluble in oils, we need to be vigilant about these contaminants. The first thing is to know what the levels of these compounds are in omega-3 oils, but we currently do not have any occurrence data. We have been looking for laboratories that can measure these in oils. After checking with several labs, I have found the following you can use if you are interested in measuring these in your own products: ALS Global, Luleå, Sweden - MMA(V) and DMA(V), and total arsenic (link). Contact - Eva Lidman - eva.lidman@alsglobal.com

Some other laboratories have not yet answered. If you have information about other laboratories that can analyze these substances, let us know. I would appreciate it if you could share any testing results (anonymous basis).

- **Suitability of ISO 5555 as sampling methods for microalgal oils (Gerard)**

  - **Gerard –** We received a question from AOCS, asking if the document ISO 5555 "Animal Vegetable Oils – Sampling" (link) can be recommended to Codex for inclusion as reference in CXS 234 also for algal omega-3 oils. The document provides information about the available methods for sampling of edible oils from bulk transport forms and preparation of laboratory samples. ISO 5555 is currently cited by Codex CXS 234/2009 (rev.2023) (link) for the sampling of various vegetable and animal oils, including fish oils, but not for microalgal omega-3 oils. Anyone working with microalgal omega-3 oils, please let us know if you agree with (or have any objections to) proposing the extension of recommending ISO 5555 for microalgal omega-3 oils in CXS 234.

  - **Action item** – Inform Gerard if you agree or object to recommending the inclusion of ISO 5555 for sampling of microalgal omega-3 oil in Codex CXS 234 (**Technical Committee members**)

- **FDA Histamine Compliance Policy Guide (Gerard)**

  - **Gerard –** The United States FDA issued an updated Scombrotoxin (histamine) Compliance Policy Guide (link). Scombrotoxin is the same as histamine and is formed during fish tissue degradation during bacterial spoilage following harvest of the fish. Histamine in spoiled fish and fishery products is a major contributor to food poisoning in the US. While histamine is not soluble in oils, it is of relevance to members that deal with fishing and crude oil production to know that the US has tightened the maximum limits for histamine in fish and fishery products. The MLs are dependent on the number of samples taken; 35 ppm and 50 ppm. A 200 pm is given that is associated with human illness.
  - **Fernando Miranda del Solar (Austral Group) –** You know, histamine is a degradation product of histidine. The quantity of histidine depends on the species. I am talking about, for example, anchovy. Anchovy has a lot of histidine, and for this reason, after degradation our level of histamine is normally higher. So, when I see this regulation, in some cases, I see that we don't reach this level for food. But the regulation in the EU is not for histamine, but for TVN (Total Volatile Nitrogen), which means putrescine, cadaverine and so on. Do you think the EU will take this regulation, and say maybe it is OK and implement it? Our situation is TVN < 60, but it is a total value, not a specific element like histamine.

- **Gerard –** I have not heard anything about the EU wanting to implement a direct regulation of histamine. The update by the FDA is the first one in a long time, some twenty years I believe. So, it doesn't seem there is a lot of pressure.
- **Harry Rice (GOED** – I can't guarantee that, but I have not any rumors to that. And it was a long time coming for the FDA for their update.

Legislative Updates (Gerard Bannenberg)

- **EFSA draft Scientific Opinion on brominated phenols**

  - **Gerard – The European Food Safety Agency (**EFSA) recently published (23 October, 2024) its Scientific Opinion on brominated phenols, called "*Update of the risk assessment of brominated phenols and their derivatives in food*" (link). I am highlighting this because it is one of a series of risk evaluations of brominated flame retardants by EFSA. In this evaluation, the main conclusion is that the exposure from food to the main brominated phenol, 2,4,6-tribromophenol (2,4,6-TBP), does not raise concerns for health. Nevertheless, this could be of relevance to GOED members because the main source of exposure of consumers to this compound is from the consumption of fish. There may not be strong regulatory follow-up on this particular class of brominated flame retardants if EFSA concludes that there is no health concern.

    I have made a summary of the four families of brominated flame retardants that EFSA has now evaluated in a series of Scientific Opinions:

Date of publication	Target substances	Risk for health from food consumption	Perceived relevance to GOED members
March 2021	HBCDDs	No health concern. The only exception is breastfed infants consuming breast milk in high amounts and with high levels of HBCDDs (a more robust exposure assessment is needed)	Low
Jan 2024	PBDEs	Current dietary exposure to PBDEs in the European population is likely to pose a health concern. The most significant effects relate to the reproductive and nervous systems. Significant relevance to GOED members because i) PBDEs are lipophilic and soluble in oils, and ii) fish and seafood (and meat) are	High

		contributing most to dietary exposure, i.e. they have a high propensity to be present in omega-3 oils	
July 2024	TBBPA and derivatives	No health concern for any age groups	Low
Oct 2024	Brominated phenols and derivatives	Dietary exposure to 2,4,6-TBP does not pose a risk for adults and children. Not enough information to evaluate risks for breast-fed and formula-fed infants. Derivatives could not be evaluated (not enough information)	Low

I the last column, I have included my personal judgement about the relevance to our sector. Among these contaminants, the class of polybrominated diphenyl ethers (PBDE's) probably has the highest potential impact on our sector; these substances are considered of concern for health, they have been reported to be present in fish, and they are soluble in oils.

EFSA indicates that it will still evaluate a series of novel and upcoming brominated flame retardants. It is not clear on which substances these are beyond the above four families. It also says that it will evaluate whether a mixture approach should be carried out, to discern any interactions between combinations of these compounds for their toxicological effects. And then based on their findings, which we don't know when that will be all finalized, the European regulators will then elaborate on the need for setting any maximum limits.

We currently do not have any occurrence data for brominated flame retardants. The first information we will be getting is from this year's Randomized Testing Program, with results available at the end of this year for 22 finished products. In addition, I would like to suggest that everybody interested in understanding the potential presence of these contaminants in their products measure their levels, and in particular the PBDEs.

All Other Business (Jenna Ritter)

- **Proposal for updating AOCS-GOED Nutraceutical Oils LPP other omega-3 fatty acids scoring**

  - **Gerard –** I like to continue with our discussion on updates to the AOCS-GOED Nutraceutical Oils Laboratory proficiency program (LPP). You have received a proposal for the updates together with the agenda. It has two points:

1. Removal of unnecessary omega-3 fatty acids from the proficiency scoring

For the AOCS GOED Nutraceutical Oils LPP, one of the following methods is asked to be used by participants for the reliable quantification of EPA and DHA; the GOED Fatty Acid method, AOCS Ce 1i-07, or the pharmacopeial methods Ph.Eur. 2.4.29 and USP 401. When these methods are used to determine Total Omega-3, the quantification is based on making a reliable quantification of EPA and DHA using certified external reference standards, and a calculation that takes into account the response factors for EPA and for DHA and the peak areas of the other five omega-3 fatty acids (*see text box*). (*the precise calculation will be provided in an update of the Guidance Documents*). Certified reference standards for these five omega-3 fatty acids are not available.

Total omega-3 content refers to the following seven fatty acid species:

Alpha-linolenic acid *(ALA; C18:3 n-3)*
Stearidonic acid */ Moroctic acid (SDA; C18:4 n-3)*
Eicosatetraenoic acid omega-3 *(ETA; C20:4 n-3)*
Eicosapentaenoic acid *(EPA; C20:5 n-3)*
Heneicosapentaenoic acid *(C21:5 n-3)*
Docosapentaenoic acid omega-3 *(DPA; C22:5 n-3)*
Docosahexaenoic acid *(DHA; C22:6 n-3)*

Since the methods do not mandate the quantification of ALA, SDA, ETA, henEPA and DPA n-3 (of particular relevance to laboratories that work according to pharmacopeial requirements), these fatty acids should not contribute to an analyst's proficiency in this LPP series. If they would contribute, as has reportedly recently been implemented by AOCS, many LPP participants would report missing values for these five fatty acids, seriously penalizing their proficiency scoring and Approved Chemist status.

Proposal: The reporting of ALA, SDA, ETA, henEPA and DPA n-3 will remain in the LPP for reporting by participant laboratories but do not contribute to the final combined proficiency score by giving them a weighting of zero in the proficiency score calculation. In this way, laboratories will still be able to check their proficiency for these five fatty acids, but laboratories who do not report on them will not be penalized in their proficiency scoring. EPA, DHA and Total Omega-3 reporting (in mg/g) do remain in the weighting and contribute to the final proficiency scoring. A method for the quantification of ALA, SDA, ETA, henEPA and DPA n-3 will be included in GOED's Guidance Documents, to clarify how to do this using the GOED method as an example.

2. Remove the contribution of area percent reporting to the combined proficiency score

GOED has for many years discouraged the use of area percent as a unit for expressing the content of EPA and DHA in omega-3 oils and products (see Industry Advisory – link). EPA, DHA and Total Omega-3 content should only be reported in mg/g and obtained using quantitative methods suitable for omega-3 oils. The GOED Monograph does not allow the use of area % for its members (even if some members will still report area percent on their

CoA's alongside reporting in mg/g). Currently, this situation is not fully aligned with the AOCS GOED Nutraceutical Oils LPP, in which the reporting of area percent is still possible for participants of this LPP and contributes to the combined score used for calculating the proficiency of all participants. In 2023-2024, seven (of about 35) laboratories only reported in area%, instead of mg/g. While this LPP is open to laboratories that are not members of GOED, with respect to the proficiency calculation, the reporting of area % should not contribute to the combined proficiency score. Only the expression in mg/g for EPA, DHA and Total Omega-3 should remain as an option to contribute to the combined score.
Proposal: Change the weighting of the reporting in area percent to zero.

Anyone on this committee who participates in this LPP, please evaluate these proposed updates, and contact Jenna or Gerard to indicate your approval or suggestions within one week or so after this meeting.

- **Action item** –Technical Committee members that participate in the AOCS GOED LPP to evaluate the proposal for updates and send comments to Jenna or Gerard (**Technical Committee members**)

- **PFAS occurrence data update**

  - **Gerard –** The last time we discussed per- and polyfluoro alkyl substances (PFAS) is already two years ago. PFAS are an interesting class of contaminants; on the one hand they receive a lot of media attention regarding environmental contamination. They are found in fish and seem to end up in fish meals. On the other hand, they don't seem to pose a significant problem for EPA/DHA omega-3 oils, which may be related to their poor solubility in oil matrices. We have collected occurrence data from several producer members; in total we have data from seven members today. A copy of the recently updated report has been sent to you with the agenda. The conclusion of the report is that in the large majority of the tested samples, whether from crude anchovy, tuna or sardine oils, refined tuna or cod liver oil, EPA/DHA concentrates (as EE or rTG), and in krill oil, PFAS are found in levels below the limit of quantification. Only in incidental findings are low levels of specific PFAS species found, up to a maximum reported level of 3,2 ng/g. These quantifiable levels are still considered very low.
    It is of course always good to know for yourself what you have in your own products, so I recommend that you test some representative samples.

- **GOED website laboratories listing**

- We have uploaded on the member-only section of the GOED website, a table (link) with all the laboratories we know of that test one or more parameters covered by the GOED Monograph. The table aims to give GOED members an idea of which laboratories can analyze which parameters. Have a look at it. Being listed does not mean that GOED endorses any laboratory. Also, the table is incomplete and based on the information GOED has today - there may have been changes, and there will likely be some errors. If you would like to complement the information for a specific laboratory, or if laboratories themselves have additional information or would like to make corrections, please contact Gerard Bannenberg. We will update it and make it better over time. Hopefully it will be useful for people looking for specific testing capacities.

- **Technical publications notification**
  - **Gerard –** As usual, we have included a listing of the technical publications published in the past six weeks. Have a look to see if there is anything of interest to you. (*a copy was sent together with the agenda*)

- **Oligomer, partial glyceride and triglycerides testing**
  - **Henriette Meiser-Zessner (KD Pharma) –** I had a question if anybody in the call had an interest in having in the AOCS GOED Nutraceutical Oils LPP also the testing of oligomer, triglycerides and partial glycerides? This is also mentioned by GOED in the monograph and guidance documents. We are interested in knowing if anyone would like to have in the LPP, because currently I don't know of any laboratory who is doing this test, and it is very important to compare the results of the method. For us it would be very important if it could be included. Please let Gerard know.
  - **Gerard** – If you are interested, it is very important that you speak up and let us know, so that Tony Bimbo and I can evaluate the need. If there is not enough interest, it does not make sense to include this in a future LPP series.

  - **Action item** –Technical Committee members to indicate if the testing of oligomers, triglycerides and partial glycerides content should be included in the AOCS GOED LPP (**Technical Committee members**)

Presentation: ***"HPLC-based Peroxide Value Determination in Omega-3 Oils"*** – **Harm Moes** (DaVinci Laboratory Solutions, Rotterdam, The Netherlands - link)

A copy of the presentation will be shared with the committee after the meeting.

Q&A

- **Mohamed Koroma (Pharmavite)** – This was great. We do a lot of peroxides testing. I see a lot of data with pretty high Peroxide Value (PV) values. Is that what you typically see for fish oils, with values of 15 on average? Or do you have data for very fresh samples with low values?
- **Harm** – We don't have access to very fresh samples, as we are not really into this market. So, I can't really comment on the samples. But I can say that the technique itself can measure very low values, very repeatable. We see that with other applications. This sample that we tested was not very fresh, and we would need some collaboration with a party that can supply fresh samples.
- **Mohamed** – I would recommend that. Also, with this chemistry you easily get oxidation on the bench, and those samples are not reflective of the products you test.

  The other thing I wanted to ask is that this technology is based on the fundamental chemistry that you showed, are you concerned that the potassium iodide itself is protected so that it does not get oxidized before it even encounters a fish oil? When we do this bench chemistry, you need to prepare the potassium iodide fresh.
- **Harm** – Yes, you have to do that. It is a closed system, but in the bottle itself it will oxidize as well, and you see it change in color slowly. You can run it for two days, and then you have to prepare a new bottle.
- **Gerard** – Do you actually use an HPLC column to obtain any peak separation? I see that you have one big peak – are all the fatty acid hydroperoxides sitting in that one peak?
- **Harm** – Yes, one peak. There is no separation. It is flow analysis, basically. All the peroxides will be reacted and come out as a single peak.
- **Jenna –** Have you done any work with pigmented oils?
- **Harm –** Not with oils, but we have measured colored products, and that is quite interesting. At the same wavelength, if it is yellow-brownish color, they will have absorption, and that will have an effect on your result. However, it is possible to do a blank analysis, where we take out the potassium iodide but still run the sample, and then you pick up the absorption of your samples, which you can subtract from the result.
  My contact information is in the presentation, so feel free to contact me with any remarks or questions.

End of meeting.

Summary of Action Items

- **Action item** – Inform Gerard if you agree or object to recommending the inclusion of ISO 5555 for sampling of microalgal omega-3 oil in Codex CXS 234 (**Technical Committee members**)
- **Action item** – Technical Committee members that participate in the AOCS GOED LPP to evaluate the proposal for updates and send comments to Jenna or Gerard **(Technical Committee members)**
- **Action item** –Technical Committee members to indicate if the testing of oligomers, triglycerides and partial glycerides content should be included in the AOCS GOED LPP (**Technical Committee members**)

Date of next meeting

- The next Technical Committee meeting will be tentatively scheduled for Thursday, December 19th, 2024

USEFUL LINKS:

- Useful documents that the committee has discussed can be found in the Technical Committee folder. You can upload any material there yourself as well: https://drive.google.com/drive/folders/0B-5CurmVIvvETm1Wd29xemU5YVU

- Past minutes can be found here:
  2024 - https://drive.google.com/drive/folders/16WcCbtwh_NY09cnx-pEpnANbubBv7Wmo?usp=drive_link
  2023 - https://drive.google.com/drive/folders/1Q_aJTzxZL106KkZJUkgrkLT2MdgDiEXh?usp=share_link
  2022 - https://drive.google.com/drive/folders/1Pt8CJafBCjIYaLZF0ZJ08csPqlzW5XaC?usp=sharing
  2021 - https://drive.google.com/drive/folders/1VGy-t4TuWtDUB30jU98unIxWYzpnZuNj?usp=sharing
  2020 - https://drive.google.com/open?id=1olF0Ab9UeGO_VaQpSshICS3xn0V8IiLK
  2019 - https://drive.google.com/drive/folders/0B0usR2nagMSpSU1aaTR6Ty0yTE0
  2018 - https://drive.google.com/open?id=1lXXmBgN3F9XwZnXKxqq0hwC-oLZl9rc_
  2017 - https://drive.google.com/drive/folders/0B6uJWj5y9FY9NDRRS2lVdUQ1ZWs
  2016 - https://drive.google.com/drive/folders/0B6uJWj5y9FY9UVZpU3NLejBIMEk

- GOED Presentations - GOED Presentations (goedomega3.com)

- GOED Newsletters: If you do not receive newsletters from GOED, please sign up since this is our best way of communicating with members. Here is the link: http://eepurl.com/F-p5