Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e. V.

Annual Report 2018

Excerpt

Content

1 Foreword

Harald Senst
Chairman

Dear ladies and gentlemen, dear members,

in the 3rd year, we inform you about the extensive activities that have been processed by the AGQM. Ensuring the quality of biodiesel and by-products of production is still the main task of AGQM. The development of the qualities of last year clearly underlines the need for quality assurance by AGQM. In addition to this task, technical issues of standardization and application but also questions of chemical law are of essential importance.

A look at the past year shows a mixed market development. The rising price for fossil fuels has led to an increase in the overall competitiveness of biodiesel, but sales are controlled by the purchasing policy of the oil companies via the GHG quota. The mineral oil companies prefer to buy those biofuels which have a high reduction value in order to use as little biodiesel as possible for GHG reduction. This market pressure inevitably leads to a quality pressure on the producers and clarifies the renewed need for quality assurance by AGQM.

In addition to market conditions, political conditions have a significant impact on future development. In July 2018, the bodies of the European Union agreed on a compromise for a revision of the Renewable Energy Directive for the period from 2021 to 2030. For biofuels from cultivated biomass, maximum levels of 7% are still set. Biofuels from used cooking oil and animal fats are double

counted. The renewable energies of the transport sector also include traction current and electromobility, which are counted 1.5 to 4 times. It is positive to see that biofuels from cultivation will continue to play a key role and that a reduction in current consumption levels has not been decided. The implementation of the Renewable Energy Directive into national law must be completed by 30.06.2021. It remains to be seen how the directive will be implemented in Germany.

This development in the market, with ever higher GHG savings at the lowest cost of delivery and the policy framework, led to an increase in the number of discrepancies in the sampling of producers and warehouse operators of AGQM members in 2018. This underlines once again the need for unannounced sampling and the regular participation of our members in the biodiesel round robin tests. Here our competent staff member Mrs. Dietrich is available for questions and assistance, our thanks to Mrs. Dietrich for her dedicated and conscientious work.

The work of the experts of the committees for technology and quality assurance and the support of the committee members are the foundation of successful quality work. At this point I want to say special thanks for their commitment.

I would also like to thank Dr. Wicht as Managing Director of AGQM. His involvement in committee and standardization work at national and European level is an important contribution to reconciling the demands with the technically possible conditions.

The topic REACh, in particular with regard to additional requests from the registration authority, the increasing numbers of REACh care contracts concluded and the maintenance contracts for the preparation and updating of safety data sheets have led to the employment of Dr. Horn as a technical expert for future tasks. I

wish Dr. Horn much success in the step of assuming the duties of Dr. Haupt.

The current political development and the priorities in all areas of activity of the AGQM show once again which challenges and enormous future potential exist. The goal must continue to be to support the members as a powerful and knowledge-oriented organization and above all to contribute in the support of the member companies to produce and distribute high-quality biodiesel.

The Board and the Management will continue to work hard for the members of AGQM.

Harald Senst

Chairman of the AGQM

2 Biodiesel Quality

With a variety of activities, AGQM ensures that the biodiesel produced by its members has a consistently high quality. These activities include, for example, the unannounced sampling at producers and warehouse operators, the organization of round robin tests, the provision of audits, coaching, no-harm testing and the organization of seminars and workshops. All AGQM members have successfully implemented the quality management system (QM system) for many years, which is regularly revised and adapted by the Quality Assurance (QA) Committee. So it stays up-to-date with legal and normative requirements.

2.1 QA Committee

The Quality Assurance Committee (QA Committee) of AGQM develops, organizes and supervises the implementation and evaluation of quality assurance measures and related projects. The committee is composed of experts from biodiesel producers, quality management and biodiesel analysis. In the reporting year, the QA Committee met twice, the meetings took place on 15.02. and 13.09.2018.

2.2 Unannounced sampling at producers and warehouse operators

In 2018 unannounced sampling was conducted in three campaigns in the winter, transition and summer period at 16 production sites and two warehouses of AGQM members. The sampling is a quality assurance measure and includes all parameters required by the legal requirements of the 36th BImSchV (Federal Immission Control Ordinance) for the proof of biofuel properties. For the parameters water content, total contamination and cold filter plugging point (CFPP), AGQM places higher demands on the biodiesel quality of its

members than required by law, which document AGQM's special quality standards.

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Discrepancies in product quality and the quality management system are consistently uncovered through the unannounced sampling, and AGQM assists concerned members with various measures (such as audits or coaching). This ensures that products that are present on the market as AGQM Goods comply with a high-quality standard and that the marking represents a reliable quality feature for customers and traders.

A total of 54 samples were taken in the main campaigns. Additional 16 samples were analyzed in the additional campaigns which are compulsory for those members who had a deviation (violation of a limit or acceptance limit) in a main campaign. The results are released in the annual Quality Report. For the 1,260 analysis values recorded, only 26 limit violations were identified, 17 of which were within the precision of the measurement method. A member who was responsible for a total of six limit violations left the AGQM on 31.12.2018. It is noticeable that particularly in the summer campaigns C2 and AC2 many limit violations occurred (altogether 17). Maybe the extremely hot summer had an impact on the production and storage conditions. Another possible cause could be that, due to an increasingly difficult market environment, producers are forced to increasingly run their processes in the marginal area of profitability.

2.3 Round Robin Tests

FAME and Vegetable and Used Cooking Oils

Together with the technical committee for mineral oil and fuel standardization (FAM) AGQM organizes a round robin test (RRT) for FAME and vegetable & used cooking oils. The RRT consists of three independent parts. In FAME Part 1, all the parameters of the standard DIN EN 14214, which are listed in the 36th BImSchV are queried, while in FAME Part 2 additional parameters, such as the cetane number and the methanol content are included. For the first time in 2018, the RRT part rapeseed oil fuel was adapted to the increased occurrence of used cooking oils (UCO) and fats and named vegetable & used cooking oils. One of the two samples contained a proportion of UCO and in addition to the parameters of DIN 51623 the fatty acid profile and the content of alkali metals (Na + K) were recorded.

In 2018, 53 laboratories from Germany, other European countries, South America and Asia participated. For members of the AGQM participation in the RRT FAME Part 1 is obligatory. After completion of the RRT, each participant received an anonymous report and a certificate of participation with an individual evaluation. The certificate is valid at the German customs office as proof of the measuring qualification.

After completion of the round robin test, the annual workshop for the participants of the round robin test took place on November 22, 2018 to discuss problems, abnormalities and possible suggestions for improvement.

Pharmaceutical glycerol

At the beginning of 2018, the third round robin test for the analysis of pharmaceutical glycerol took place. Each participant received two samples, to be tested according to methods of the current edition of the European Pharmacopoeia and selected standard methods.

The evaluation of this year's glycerol round robin test shows similarly good results as last year, with some parameters achieving an improvement compared to the previous year.

2.4 Quality Check Material

Quality check material (QC material) has proven itself in order to regularly check the measuring methods used in the laboratory, to obtain reliable measuring results for quality control and to identify operating, device and systematic errors. In 2018 AGQM has extended the range of Quality check material by the QC material Pharmaglycerin (PhGly) for determining various parameters of the pharmaceutical glycerol analysis. The assortment includes now QC

material Multireference (MR) for the determination of a multitude of parameters of the DIN EN 14214, the QC material OS for the determination of the oxidation stability as well as the QC material MeOH for the determination of the methanol content. AGQM QC material is generated together with Analytik-Service Gesellschaft mbH (ASG) and validated in the respective round robin tests.

2.5 No-Harm Tests

Oxidation stabilizers for FAME in diesel fuel and heating oil

In 2018, the 12th No-Harm test was successfully completed. The No-Harm test is a test catalogue developed jointly with the mineral oil and additive industry, which allows to evaluate oxidation stabilizers for biodiesel as a blend component in diesel fuel or in heating oil for possible undesired interactions. The diesel fuel tests are carried out in FAME or in a B10 blend fuel, while the heating oil tests are carried out in B20 blends. The different and demanding requirements of the No-Harm tests can be found on our homepage.

Five products were tested, two of which passed the no-harm test fuel and were included in the No-Harm list fuel. One additve was added to the No-Harm list heating oil as well.

Flow improvers for FAME in diesel fuel

In cooperation with the additive industry, the mineral oil industry and the German Society for Petroleum and Coal Science and Technology (DGMK), a No-Harm test for flow improvers for FAME (BDFI) is currently under development. The test is intended to test possible negative interactions of BDFI with cold additives used in the diesel fuel, such as middle distillate flow improvers (MDFI) and wax anti-settling agents (WASA) as well as the diesel matrix.

2.6 Analytics Seminar

One of our tools to gain experience in the field of biodiesel analytics and laboratory work is the three-day Analytics Seminar. Besides the production and analysis of own produced biodiesel in the technical center the seminars also include various technical lectures on the current legal basis, new developments in biodiesel and fuel standardization, as well as quality assurance and handling of analytical data.

Together with Analytik Service Gesellschaft mbH (ASG) an analytics seminar in English language with six participants from Uruguay, England, France, Switzerland and Germany and a German-speaking seminar were held in 2018.

2.7 Audits

Member without an ISO 9001 certification (or equivalent) must attend the annual AGQM audit. In 2018, three members successfully participated in the audit and met 100 % of the requirements. In addition, two initial audits were carried out successfully (91.8 or 96.9 % respectively), leading to the addition of two new members.

3 Biodiesel Standardization

In the reporting period, AGQM participated in the standardization work in various European and national standardization bodies and has taken over the project management of the Total Contamination parameter and the leadership of the Task Force FAME, which is in charge of FAME standardization activities at European level. The Technical Committee for Mineral Oil and Fuel Standardization (FAM) at DIN gratefully takes over the secretariat.

3.1 Fuel Standardization

Labeling of fuels

During the reporting period, work continued on the implementation of EN 16942 on labeling in the various fuel standards. The introduction of the labels in the public sector in Germany should have been completed on the basis of the European Directive 2014/94/EU in October 2018. This time horizon could not be met. An implementation via the 10th BImSchV is not expected before autumn 2019.

Amendment of EN 14214

The amendment of EN 14214 for biodiesel was completed. In addition to the labeling, the combination of the climate tables for pure FAME, the introduction of new methods for the determination of the cetane number and EN 12662:2008 as arbitration method for the determination of the total contamination of FAME are the main adjustments. EN 12662:1998 may still be used as an analytical method. The date of publication is not yet known.

Total Contamination

For the method for determination of total contamination in FAME, an inter-laboratory study was organized and carried out with the help of various stakeholders during the reporting period. The evaluation is planned for spring 2019. The reason for reviewing the

method was the finding that, when testing the total contamination of pure FAME (B100) according to EN 12662:2014, the use of solvents leads to false measurement results compared to the standard versions EN 12662:1998 or EN 12662:2008. As a result, WG 31 (CEN/TC 19) was able to develop a new method which unfortunately did not lead to the required precision data in the first ILS.

Revision EN 590 and EN 14214

In December 2018, new work items (NWI) for the revision of EN 590 and EN 14214 were adopted. The revisions will start in 2019. For EN 14214 among others, the inclusion of the parameters saturated monoglycerides and sterylglycosides as well as the adaptation of the limit values for phosphorus and alkaline and alkaline earth metals are under discussion.

MCP guideline - Nitrogen Content

On August 30, 2018, the implementation of the MCP Directive (Medium Combustion Plant) as the 44th BImSchV was committed. Among other things the sulfur dioxide, total dust and nitrogen oxide emissions are limited for combustion and gas plants in the range of 1-50 MW. A transitional period for existing plants should apply until 01.01.2025. In order to be able to guarantee compliance with the nitrogen oxide emission limit values a limit for the nitrogen content in heating oil was requested. The introduction of a heating oil quality HEL low-nitrogen, low-sulfur requires the adaptation of DIN 51603-01.

Marine fuels

The focus was once again the sulfur cap of 0.5 % for marine fuels planned for 2020. Compliance with the limit value is currently expected to be achieved by mixing bunker oils/heavy oils with middle distillates. In particular, the stability and homogeneity of these hybrid fuels produced and mixtures thereof is questioned. Since the establishment of an ISO standard is not foreseeable, a publicly available standard (PAS) is to be created. The PAS should be completed by mid-2019. The standardization of LNG as a marine fuel is also intensively pursued.

3.2 Published Standards

The following standards were published in 2018 and can be obtained from the Beuth publishing house.

Standard	Information	Remarks
DIN EN 16709: 2019-02	**B20 / B30**	Specification of the requirements and test methods for high FAME diesel fuels (B20 and B30) for use in diesel motor vehicles.
DIN EN 16734: 2019-02	**B10**	Determination of requirements and test methods for diesel fuel containing up to 10.0% (V/V) FAME. Apart from FAME content, the test parameters and limit values are identical to those of EN 590.
DIN EN 17057: 2018-03	**Saturated Monoglycerides**	Determination of the content of saturated monoglycerides (1-C16:0, 2-C16:0 and 1-C18:0) in FAME. The precision data of the GC-FID method specify a range of application of 200-1500 mg/kg.
CEN/TR 17225: 2018	**Oxidation Stability**	Evaluation of oxidation stability determination procedures for middle distillate fuels and their mixtures with FAME (Especially Rancimat and PetroOxy).
DIN ISO 8217: 2018-10	**Marine Fuels**	Specification of the requirements for class F marine fuels. Classes DFA, DFZ and DFB fuels permit a FAME content of up to 7.0 % (V/V).
DIN EN 15940: 2018-08	**Paraffinic Diesel Fuel**	Sets out the requirements and test methods for paraffinic diesel fuels, which may have a FAME content of up to 7.0 % (V/V). Depending on the cetane number (high or normal), two classes of paraffinic diesel fuels are defined.

4 Biodiesel Application and Technology

4.1 Technical Committee

The Technical Committee (TC) is composed of experts from the biodiesel industry, various research and public institutes to sight, professionally support and promote biodiesel projects.

The projects supported by AGQM address the groundbreaking topics of hybridization, fuel stability and compatibility as well as performance testing and the use of synthetic fuels in the current fuel mix. The aim is to demonstrate the application and usability of biodiesel under the current challenges.

4.2 Research and Development

PHEV project

In the project interactions of petrol and diesel fuel and fuel-carrying vehicle components of plug-in hybrid electric vehicles could be investigated during prolonged storage. In the last part of the project, the functionality and influence of the aged fuels and blends on the components are examined and evaluated.

JFTOT-Diesel II

The laboratory test method for the evaluation of diesel fuel developed in the predecessor project "JFTOT-Diesel I" with regard to its tendency to create internal diesel injector deposits (IDID) is validated. The DDFT - Diesel Deposit Formation Test - makes it possible to produce appropriate coverings on heating rods. The aim is a fast and cost-effective classification of diesel fuels according to their deposit formation tendency in injection components as a function of the temperature.

Deposit formation and avoidance of deposit formation using Biodiesel

Based on the Diesel Deposit Formation Test (DDFT), the tendency of biodiesel and blends of biodiesel and diesel fuel to form coats is investigated. From the results obtained for the formation of thermo-oxidative deposits, the usability of the fuels in injection components is to be evaluated. In the future, the developed laboratory test method should replace the XUD-9 engine test in the no-harm investigations of the AGQM.

DGMK 783

Examination and assessment of the content of polar species in diesel fuels with regard to their tendency to deposit formation. Also, chemical changes of the polar components due to thermal stress will be analyzed and particularly reactive compounds with a high tendency to deposit should be identified. On the basis of these results, it should be examined whether the content of polar components can be correlated with the already determined tendency to deposit on injection components.

DGMK 784

After the ENIAK test rig has been set up in the predecessor project, it will be validated in this project and the influences such as injector temperature, operating cycle and fuel on the formation of internal deposits will be investigated. The aim is to develop a rapid test, with which fuels and additives can be reproducibly and realistically investigated and differentiated for their deposit formation.

DGMK 780

The research project aims to develop a forceful and therefore conservative test method for the evaluation of the resistance of materials in heating oil FAME, heating oil HVO-FAME and diesel FAME blends. As an approach, the burden of aged alternative fuels is represented by synthetic test media. These have to be developed in the project. The corrosion is accelerated by increased pressure and elevated temperature. A selection of metals, alloys and polymers will be outsourced with the accelerated test method in the synthetic test media as well as standardized test methods in the test fluid for B20.

4.3 Completed Research Projects

The final reports of the following research projects can be obtained from the German Society for Petroleum and Coal Science and Technology (DGMK).

DGMK 764-2

Based on the results of the predecessor project (DGMK 764-1) the investigations regarding the cold resistance of diesel fuel and operability of vehicles was continued with a selected test vehicle. Five diesel fuels (winter goods and transitional goods) were used according to a defined procedure to figure out whether the test vehicle is capable of differentiating different fuels in their cold behavior. With investigations in the laboratory and on the cold test bench, a broader database is being developed, which could help to clarify the relationship between vehicle technology, fuel quality and drivability of diesel vehicles at low temperatures. The project is already completed. At the time of the preparation of the annual report, no final project report is available.

DGMK 767

The aim of the project was the development of an analytical methodology for the simulation of the evaporation and sediment formation behavior as well as the elaboration of differences between fuels with different high deposition potential. The evaporation behavior of the considered fuels could be investigated experimentally in the context of the project with two evaporation concepts (fleece evaporation, spray evaporation). A valid correlation between chemico-physical properties and the deposition potential could only be shown in outline. In addition to the deliberate generation of deposits, the project also investigated regeneration strategies for the subsequent removal of the resulting deposits. It was found that, depending on the fuel used, complete

regeneration is possible at temperatures between 300 °C and 540 °C.

4.4 Other Committees

For the development of solutions for current and future challenges in the field of fuels, intensive exchanges of information and experiences are necessary. Therefore, AGQM participates actively in different committees.

The Working Group Additives is a joint working group of DGMK and deals with manifold actual topics around additives e.g. the further development of No-Harm tests to avoid undesirable side effects when using additives in fuel. Here, among other things, the development of a no-harm test for flow improvers for use in biodiesel is being worked on. The DGMK Technical Committee for fuels in heating oil applications deals with topics and issues relating to heating oil and is made up of stakeholders from the mineral oil, additive and appliance industries. In the context of research projects, the focus is particularly on the transfer of results to the small and medium-sized enterprises, but also on the development and consideration of the general conditions of liquid fuels as an energy carrier. The biofuels commission of the Union for the Promotion of Oil and Protein Plants (UFOP) deals with the framework conditions of biofuels policy as well as the promotion and monitoring of research projects. As a body of the Association of Manufacturers of Components for Thermal Engineering Equipment (VHB) the working group oil edited the regulations (for example Construction Products Ordinance, Plant Regulation water pollutants) and the standardization-specific issues in the field of heating oil applications.

4.5 Approval list of commercial vehicles

Figure 1: Approval list of commercial vehicle manufacturers.

On June 26, 2018, the current approval list of commercial vehicle manufacturers for the operation with biodiesel could be published. It shows that even the latest Euro VI engines can be operated with standardized biodiesel blends of 20 percent and 30 percent (B20 and B30, standard EN 16709) and pure biodiesel (B100, standard EN 14214). The approval list drawn up jointly with UFOP and the Association of the German Biofuel Industry (VDB) shows that the use of increasing amounts of biodiesel in heavy-duty traffic is technically possible even under the current most demanding emission standards. The list shows at a glance a summary of engine and vehicle types that are approved for the use of biodiesel. The list is available for download together with the manufacturer's technical bulletins.

4.6 Leaflets – Cold Properties of Biodiesel

In November 2018 the new leaflet on the low-temperature properties of biodiesel was published. It contains information about the normative basics and cold parameters. It also shows how different FAME types and fatty acid patterns affect the cold properties of biodiesel. The influence and mode of action of additives are also described.

The leaflet on cold properties complements the series of brochures that already provide information on tank and storage, biodiesel analysis, recommendations for additional requirements for use as a blend component and the transport of biodiesel. All leaflets are now also available in a collection.

Figure 2: AGQM Leaflets

4.7 REACH

All substances covered by Regulation (EC) No. 1907/2006 must be registered since 01.06.2018. For this reason, the European

Chemicals Agency (ECHA) has three times as many registrants than at the last registration deadlines. In order to meet the changing requirements, ECHA has adopted the Perennial Strategy Plan 2019-2023. Part of the measures concerned updating and adapting the software provided by ECHA.

ECHA also extended the compliance checks for registration dossiers. These will be reviewed in order to clarify whether the information submitted by registrants meets the legal requirements such as the description of substance identity and the safety information in the dossier, including the chemical safety report or information related to the protection of human health. These so-called "compliance checks" of the registration dossiers also affected the biodiesel industry in 2018. As a result of a thorough manual test of a registration dossier lead to the request for subsequent delivery of three parameters that were not specified in the original lead dossier (data waiving). The AGQM assists

registrants in analyzing the parameters by certified laboratories, updating the dossier and submitting the update to ensure that all dossiers remain valid.

The companies' interest in REACH continues even after the last registration deadline in May 2018. During the reporting period, REACH registrations were carried out for various companies, registration dossiers were supplemented and safety data sheets were prepared. Thus, for example, a successful opt-out of the substance potassium sulfate could be carried out, whereby the classification as a hazardous substance could be omitted.

REACH and Brexit

When it became clear at the end of 2018 that EU-UK negotiations were stalling and the risk of leaving the EU without any kind of contract became more real, there were many inquiries from European companies. ECHA is encouraging businesses to act now to continue to meet their obligations under REACH. UK-based manufacturers can either move substance registrations to an EU country or order an only representative in one of the E27 countries. EU-based companies must prepare for the placing on the market of substances in the UK after 29 March. The British Health and Safety Executive (HSE) has published guidelines on its website. Subject to further developments, ECHA will open a "Brexit window" in REACH-IT from 12 to 29 March so that UK companies can make changes or transfer their REACH registrations. Step-by-step instructions for using the "Brexit Window" are available on the ECHA websites. The danger of a no-deal scenario is likely to become a focal point for REACH activities in 2019.

5 Association

Association Quality Management Biodiesel (AGQM) was founded in 1999 as an initiative for the quality assurance of leading biodiesel producers and traders. The 27 members were composed in 2018 of 13 biodiesel producers, 9 supporting members, 3 associations and one trading company (Actual member list). AGQM represents about ¾ of the German biodiesel production.

5.1 General Assembly

The annual general assembly convened on November 9, 2018 traditionally in the House of Agriculture and Food Industry in Berlin. The members approved the annual accounts for the year 2017, discharged the board and the management and adopted the draft plan for the budget 2019. Due to the resignation of the chairman Dr. Frank Kohl because of professional changes, an unscheduled election of a new board member by the members took place.

Dr. Matthias Heume, Archer Daniels Midland AG, has been appointed as a new member of the board. Mr. Harald Senst, Verbio Diesel Schwedt GmbH, takes over the position of chairman. Mr. Jeremie Groos, Archer Daniels Midland AG, was elected by the general assembly as vice chairman of the AGQM. Dr. Rüdiger Brautzsch remains Deputy Chairman.

Dr. Wicht would like to thank Dr. Kohl for his many years of work for the benefit and well-being of the association.

5.2 Board

Harald Senst (Chairman)
Verbio Diesel Schwedt GmbH

Dr. Rüdiger Brautzsch (Vice Chairman)
Cargill GmbH

Jeremie Groos (Vice Chairman)
Archer Daniels Midland Research GmbH

Corina Protze
Biowerk Sohland GmbH

Elmar Baumann
Association of the German Biofuel Industry

Dr. Ralf Türck
TECOSOL GmbH

Dr. Matthias Heume
Archer Daniels Midland Research GmbH

5.3 Member List

Producers

ADM Hamburg AG
Nippoldstr. 117
21107 Hamburg
www.adm.com

ADM Mainz GmbH
Dammweg 2
55130 Mainz
www.adm.com

Biowerk Sohland GmbH
Am Gewerbering 6
02689 Sohland/Spree
www.biowerk-sohland.de

Bunge Deutschland GmbH
Inselstraße 10
68169 Mannheim
www.bunge-deutschland.de

Cargill GmbH
Industriepark Hoechst, Gebäude C 332 (Biodiesel)
65926 Frankfurt/Main
www.cargill.de

ecoMotion GmbH
Brüeler Chaussee 3
19406 Sternberg
www.ecomotion-gmbh.de

german biofuels GmbH
Am Hünengrab 9
16928 Falkenhagen
www.gbf-bio.de

KFS Biodiesel Köln GmbH[1]
Industriezubringer 3
49661 Cloppenburg
www.kfs-biodiesel.de

Louis Dreyfus Company Wittenberg GmbH
Dessauer Str. 126
06886 Lutherstadt Wittenberg
www.ldcom.com

Münzer Bioindustrie GmbH
Ölhafen Lobau - Uferstraße 12
A-1220 Wien
www.muenzer.at

NEW Natural Energy West GmbH
Industriestr. 34
41460 Neuss
www.c-thywissen.de

TECOSOL GmbH
Marktbreiter Straße 74
97199 Ochsenfurt
www.tecosol.de

[1] Leaved AGQM on 31.12.2018

VERBIO Diesel Bitterfeld GmbH
Stickstoffstraße
06803 Greppin
www.verbio.de

VERBIO Diesel Schwedt
Passower Chaussee 111
16303 Schwedt
www.verbio.de

Trader

SBE BioEnergie Handelsgesellschaft mbH
Europaallee 20
66113 Saarbrücken
www.sbe-bioenergie.de

Associations

MVaK Mittelstandsverband abfallbasierter Kraftstoffe e.V.
Unter den Linden 10
10117 Berlin
www.mvak.eu

UFOP-Union zur Förderung von Oel- und Proteinpflanzen e. V.
Claire-Waldoff-Straße 7
10117 Berlin
www.ufop.de

Verband der Deutschen Biokraftstoffindustrie e.V.
Am Weidendamm 1A
10117 Berlin
www.biokraftstoffverband.de

Sponsoring Members

Evonik Industries AG
Feldmühlestraße 3
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Evonik Industries AG
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Fraunhofer-Institut für Umwelt-, Sicherheits- u. Energietechnik UMSICHT
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46047 Oberhausen
www.umsicht.fraunhofer.de

inaChem GmbH
Engstenberger Höhe 10
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http://www.inachem.de

LANXESS Distribution GmbH
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51359 Leverkusen
www.lanxess-distribution.com

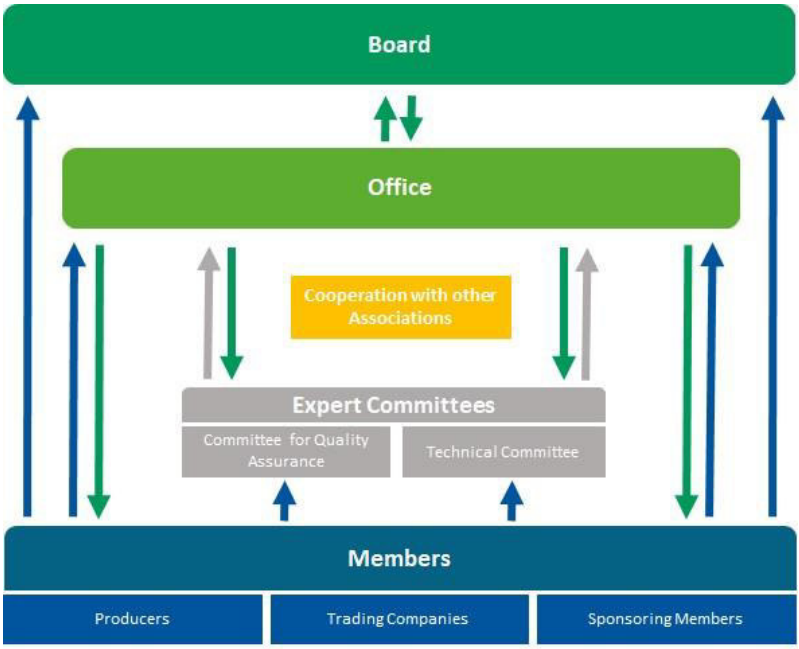
Oel-Wärme-Institut GmbH
Kaiserstraße 100
52134 Herzogenrath
www.owi-aachen.de

Österreichisches Biotreibstoff Institut (ÖBI)
Graben 14/2
A-1014 Wien
www.biodiesel.at

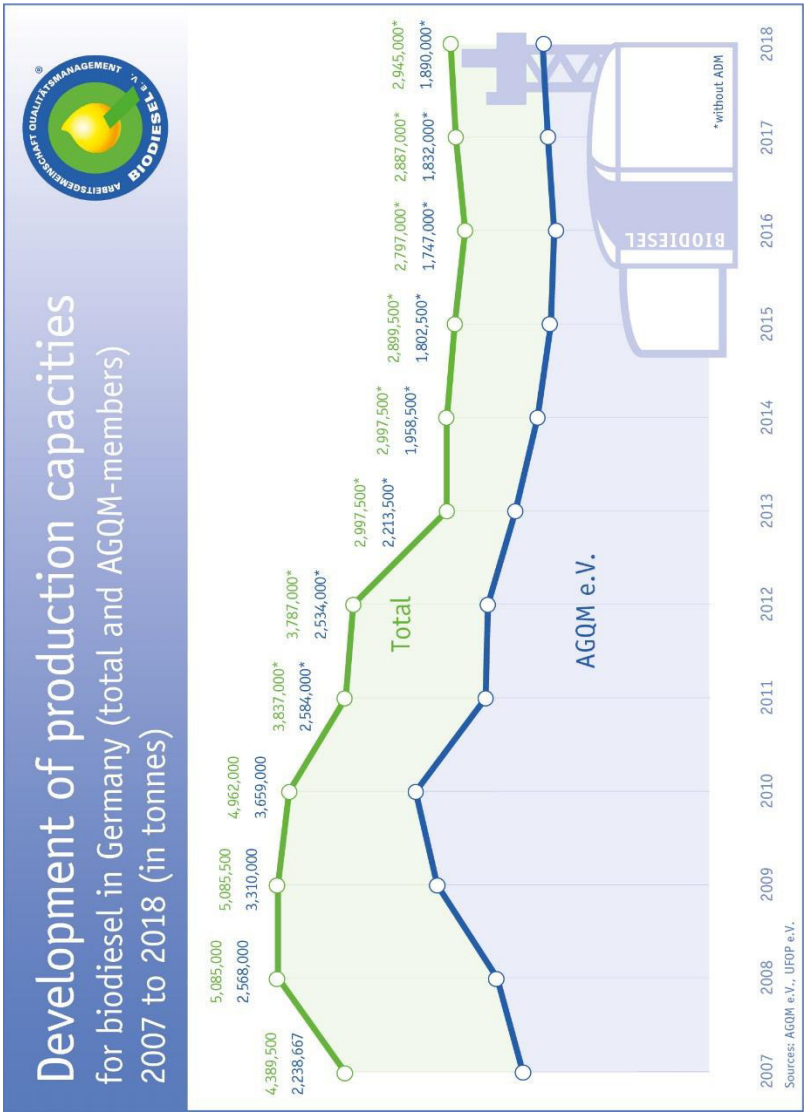
Oxiris Chemicals S.A.
Pol. Ind. Nord-est, Crta. C-35 km 59
08470 Sant Celoni, Barcelona
www.oxirischemicals.com

UBPM Umwelt - Beratung und Produkt - Management GmbH & Co. KG
Im Gries 14
85414 Kirchdorf/OT Nörting
www.ubp-management.de

5.4 Structure



5.5 Production Capacity



Production capacity of AGQM members (Austria and Germany)

Company	Location	Capacity (t/year)
ADM Hamburg AG -Werk Hamburg	Hamburg	no information
ADM Mainz GmbH	Mainz	no information
AT Niederpöllnitz	Harth-Pöllnitz	58,000
Biowerk Sohland GmbH	Sohland	80,000
Bunge Deutschland GmbH	Mannheim	100,000
Cargill GmbH	Frankfurt/Main	300,000
ecoMotion GmbH	Lünen, Sternberg, Malchin	162,000
german biofuels GmbH	Falkenhagen	130,000
KFS Biodiesel Köln GmbH	Niederkassel-Lülsdorf	85,000
Louis Dreyfus Company Wittenberg GmbH	Lutherstadt Wittenberg	200,000
NEW Natural Energie West GmbH	Neuss	260,000
TECOSOL GmbH	Ochsenfurt	75,000
Verbio Diesel Bitterfeld GmbH & Co. KG	Bitterfeld-Wolfen	190,000
Verbio Diesel Schwedt GmbH & Co. KG	Schwedt	250,000
MÜNZER Bioindustrie GmbH	Wien	140,000
	Total:	**2,030,000**

Date: 01/07/2018

6 Outlook

Once again we look back on an eventful and successful year. At the end of 2018, economic pressure has declined due to very good sales figures. However, with regard to the revision of the Renewable Energy Directive (RED II) that promotes a phase-out of first-generation biofuels in the direction of 2030 and various multiple allocations, the creation of necessary framework conditions will be missed in order to make it possible to achieve the ambitious climate protection goals.

In this context, it has to be shown that biodiesel of the 1st and 2nd generation is currently the most important renewable energy source that can be used without further effort in current technical applications. Applicability and compliance with the highest emission levels is shown in the published approval list of the commercial vehicle manufacturers, which is to be expanded to include marine engines in the coming year. In addition, the accompanying research projects focus on the topics of hybridization, polarity/fuel mix, material resistance and deposit formation as well as the requirements of future mobility.

In 2018, a slight increase in limit violations was found in the sampling at producers and warehouse operators. This is mainly due to the challenging temperatures during the extreme summer and the tense economic situation due to cheap and extensive imports. The fact that the producers have accepted and mastered these challenges shows the overall excellent quality of the biodiesel samples tested. The quality of the biodiesel is one of the main pillars to ensure an unproblematic use. For this reason, we will continue to meticulously review them and take every opportunity to increase them. The quality measures and service offers are therefore to be expanded again in the coming year. In addition to the introduction of a seminar on glycerol production and analysis

and the assumption of auditing, in 2019 the No-Harm test for biodiesel flow improvers will be offered for the first time.

The assurance of quality was also the basic idea when founding AGQM on December 6, 1999. Since then this basic idea could be steadily expanded and refined without ever losing sight of it. This successful story will be looked back on at the jubilee celebration in 2019. However, the celebrations for the AGQM's 20th anniversary will also be used to look at the current situation as well as future concerns and challenges.

We look forward to a successful jubilee year 2019 in the name of quality and the product biodiesel.

Imprint

Editorial

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