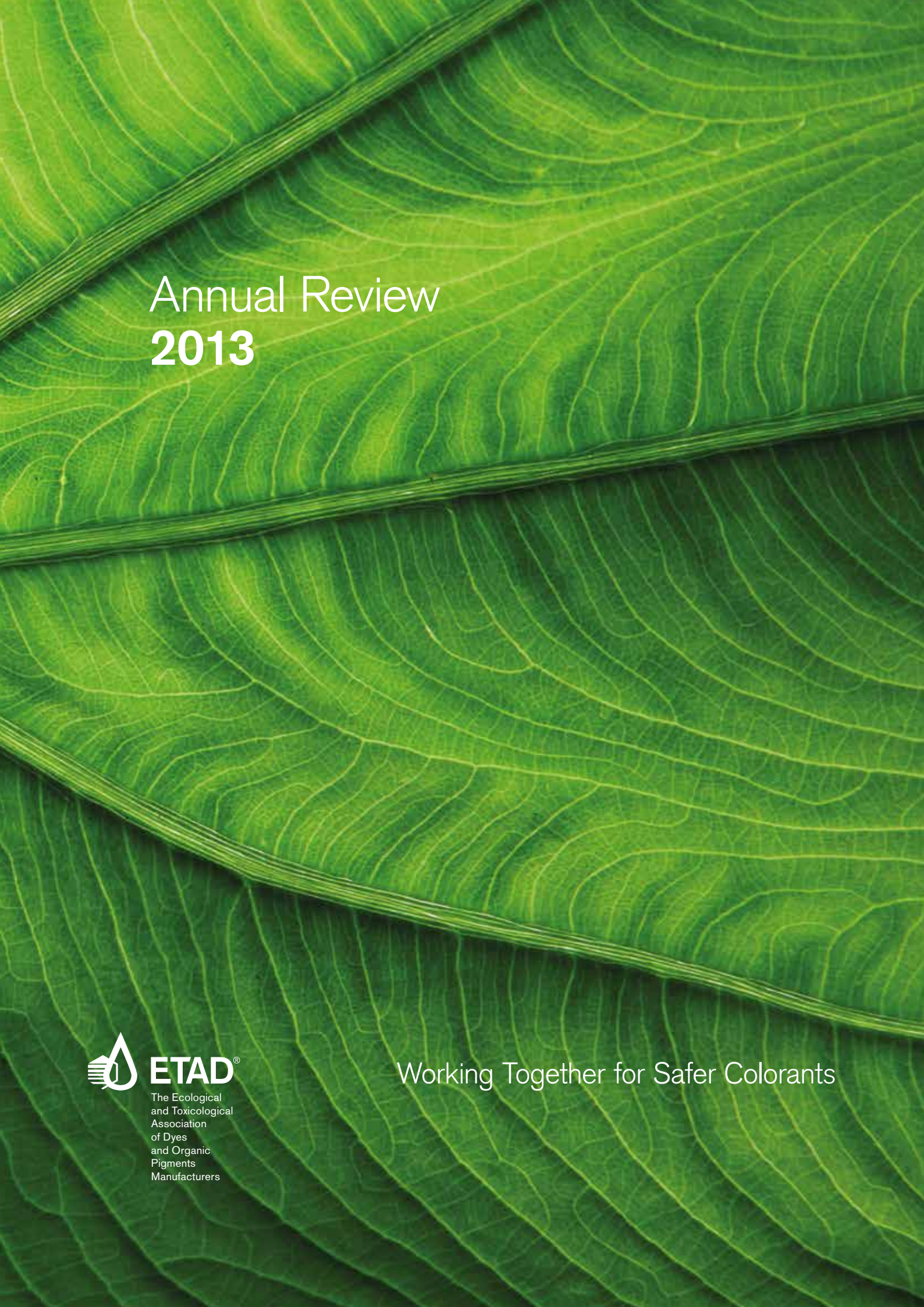


Annual Review
2013

ETAD®

The Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers

Working Together for Safer Colorants

Contents

Mission statement

The purposes of the association are the following:

To coordinate and unify the efforts of manufacturers of synthetic organic colorants to minimize possible impacts of these products on health and the environment.

To achieve these ends by the most economic means without reducing the level of protection of health and the environment.

To encourage harmonization of health and environmental regulations in key geographical areas.

To represent the positions and interests of the manufacturers of organic colorants towards authorities, public institutions and media.

To promote responsible environmental and health risk management during manufacture, transport, use and disposal.

To enhance the recognition of the commitment of ETAD members to responsible behavior with respect to health and the environment.

Preface from the President

The year 2013 saw a gradual improvement in the colorant business, especially in the dyes sector, where the smiles of the dye manufacturers seemed a bit wider than the ones of the pigment manufacturers. However, the dyes people had their own sword of Damocles hanging in the form of the ZDHC, and ETAD was at the forefront of addressing this issue. For the pigment people the nano issue raised its head again and the first foray into inhalation studies is being organized by ETAD. New sets of regulations will come up, e.g. with Korea looking to set up a REACH-like regulation, and, of course, the other pending issues, like the amines in napkins, continued to vex. At the ETAD secretariat it was business as usual or even more hectic, and as always the POC, the DOC and the RAC were at the forefront of old and new issues. I would like to compliment the Chairmen as well as the members of the committees for the excellent work they did during the year. There are reports and minutes of meetings of all the committees so I am not going to go into details which would be repetitive, but will only say that this work forms the pillars of ETAD and enhances the stature of the organization globally.

The General Assembly held in Istanbul was a success and all the meetings well attended and fruitful.
Continuing with the trend of a joint final meeting with all the committees once again it was gratifying to note the positive energies brought about and the proactive participation of all member companies of ETAD.
This truly has been an idea which has worked well!
Another idea which was not as successful has been the introduction of the new member categories, which was thought to increase the membership base and allow the net to spread wider, but has not found many takers so far. This issue was introspected upon during the Board meeting in India, and it was decided to take it up during our next meeting in order to discuss further action.
On a personal note this GA should have been a farewell one for me as President, but I was persuaded to continue for a second term, either because everyone likes me too much or they do not find anyone else.
I of course prefer to believe the former. In any case the new Board was proposed with a new Treasurer and was elected unanimously. The focus areas were declared for the coming year and, as mentioned, close attention would be given to the ZDHC to temper the new proposed standards and make them more realistic and achievable, whereas the pigment producers have to contend with the nano issue, the finalization of toy standards, and few others which have been highlighted in the committees' reports. I would especially like to mention and highlight the formation of the Environment Sustainability Committee which, as you are aware, was inaugurated in January 2013 in India and, thanks to the strong push from Walther and the efforts of the Chairman Dr. Pariti, started to move slowly but surely.
At this point, an observation is due from my side by recognizing and appreciating the flexible approach of the ETAD Board and members to this issue. As it is known sustainability, ecology and waste management issues are taken for granted as a "must do" by the Western and Japanese manufacturers of colorants. However this is not always the case in our sub-continent and in China, which undeniably are the largest producers of pigments and dyes today.
The need was felt to push sustainability issues as a new core activity for ETAD and this was fully supported by the Board. We already see the first signs of fruit where authorities in the State of Gujarat, India recognized Responsible Care companies and agreed to grant them a special status, to encourage others to follow and reward those who do. ETAD has played a positive role in these initiatives and this, I believe, is one of the changing roles for our association in the future.

Speaking specifically for India, it is observed that a large producer like India has relatively few standards for colorants as regards safety and toxicology. ETAD, along with the Indian Chemical Council, has continued to interact with the Bureau of Indian Standards, and this year I am glad to report that the first concrete success has been achieved, where the BIS has adopted the ETAD methods No. 212 (PAAs) and No. 229 (PCBs).

I would also like to briefly touch upon an interesting and well attended event held in Mumbai, India with a Symposium on "Waste Management Issues facing the Colorant Industry", followed by a seminar on "Responsible Care – A solution for Growth of Chemical Industry". The Member Secretary of the Gujarat Pollution Control Board, who was the chief guest, clearly stated his appreciation on the initiatives taken by ETAD in addressing the environment sustainability issues faced by the colorant manufacturers.

The following day there was a conference on "Product Stewardship, Regulations and Compliance for Colorants", where for the first time we had participation from the Bureau of Indian Standards (more details are provided in the IOC report). This was followed by the ESC meeting, and I would also like to point out that even though during this meeting the views were diverse and at times somewhat confused, finally a clear and cohesive plan was formulated. This, I believe, is what makes this organization an open and positive one.

Now, on a parting note (as they say "life goes on"), some people leave and new people join, yet it is with a lot of nostalgia that we bid goodbye to one of ETAD's stalwarts, Dr. Lawrence, whose immense contributions and extremely competent work will surely be missed, not to mention his dry wit and humor, which played a big role in reducing the stress of many a vexing issue. Keep in good health and touch, Simon.

Also of special regret was the announcement by Dr. Yoshida of Dainichiseika that he would be leaving the Board and his successor would join in the next GA. I would like to express my appreciation for the immense contribution of Dr. Yoshida who played a pivotal role in fostering the activities of the JOC, which rose to new heights during his tenure. His precise and incisive comments contributed greatly to the diverse and multicultural atmosphere of ETAD. On behalf of ETAD I wish him all the best "whenever, whatever, wherever."

As new players in the team I am happy to welcome two new gentlemen in the Board, Mr. Roentgen (Huntsman) and Mr. Fischer (Bezema).

We also bid adieu to Ms. Colombo, who will leave the ETAD office in Basel in March 2014, and wish her well for her future life. I would also like to inform that Fidares Treuhand will be taking over ETAD's administrative tasks and would like to welcome its staff into the ETAD fold.

Finally I would like to thank all of you for reposing confidence in me and for your enthusiastic and proactive participation, especially Walther, Pierfrancesco, Bertil and Diana who kept it all going. Keep up the good work.

Mr. Ravi Kapoor
(Heubach Colour Pvt. Ltd.)

From the Executive Director

Looking back into 2013 I am very pleased with the outcome of all our activities. I would just like to highlight some of them in the following paragraphs.

We were quite successful with our analytical projects, e.g. the determination of extractable cobalt in dyes, and the excellent work of our analytical experts' team, who carried on the update of two ETAD analytical methods: the determination of PCBs and primary aromatic amines in pigments. Additionally, they contributed with their pigment-specific analytical knowledge to the important project with the German Printing Ink Association on the determination of PAAs in napkins. More details of these analytical projects are contained in the well-written reports of the Dyes Operating Committee and the Pigment Operating Committee.

Another important project I would like to highlight is the planned short-term inhalation study of selected pigments in their nano and non-nano form, respectively. I strongly believe that, once these studies have been finalized, they will show clearly whether there is any additional toxicity stemming from the presence of nanoparticles in an organic pigment.

As regards our external activities, Dr. Fois became a member and now represents ETAD companies on the Technical Advisory Committee of ZDHC (Zero Discharge Hazardous Chemicals) group. One major activity is the discussion of impurity limits for chemicals used in textile processing. The result of these discussions will have an influence on ETAD's impurity list for dyes. ETAD companies currently use this list as a reference for their products' quality, to help their customers meet current thresholds listed in retailer standards and international regulations.

Additionally, Mr. Hanke participated as a guest in a meeting of the ISO committee and will look for opportunities to provide ETAD's expertise to pigment-related topics.

My share of representative work was to continue the communication with Asian associations and government as well as to enhance the communication with CPMA and Eurocolour. In 2013 we started to hold regular web conferences to update each of our associations on ongoing projects and thus help avoid duplication of activities.

We also had several changes in our internal organization, and I am happy to welcome two new gentlemen in the ETAD Board, Mr. Roentgen from Huntsman (Director R&D) and Mr. Fischer from Bezema (CEO). To strengthen further the ETAD label one important topic in the Board meetings has been the implementation of periodical self-declarations to be done by ETAD companies starting in the coming years. At our next general assembly in Barcelona I will give a presentation about this self-declaration, in which compliance with the impurity levels in dyes will also be addressed. Further Board members were also in favor of my suggestion of a possible cooperation between the standard issuer bluesign and ETAD. A first informal meeting with bluesign representatives was held in August at their premises in St. Gallen in Switzerland.

As regards the ETAD secretariat I have to inform you that our senior consultant Dr. Lawrence left ETAD end of September 2013 to enjoy his well-deserved "second" retirement. Our secretary Ms. Colombo also left ETAD end of March 2014. We wish her all the best for her future undertakings. Two have left and one has come, and this is Dr. Xie, who worked for BASF as expert for sensitive applications. He has started 1st March 2014 and I wish him success and satisfaction in his new position at ETAD.

Last but not least, in this annual report you will also find for the first time the report of the Environmental Sustainability Committee, describing in detail its activities.

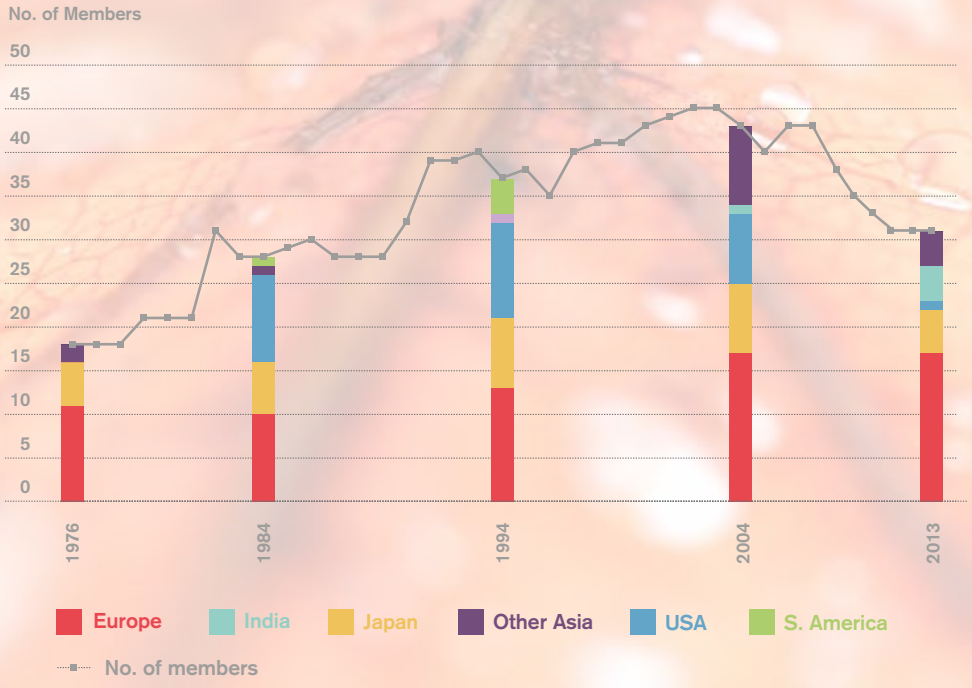
As the French say "Gratitude is the memory of the heart", and with this I would like to thank our Board members, as well as the committees' chairmen and members for their great support for ETAD.

Dr. Walther Hofherr

Membership

T&T Industries Corporation re-joined ETAD in 2013, whereas the textile, paper and emulsions business of Clariant separated from the pigments business and continued its ETAD membership as the new company Archroma Management GmbH. Kyung-In Synthetic Corporation and Sanyo Color Works Ltd. resigned their membership effective January 1st, 2013.

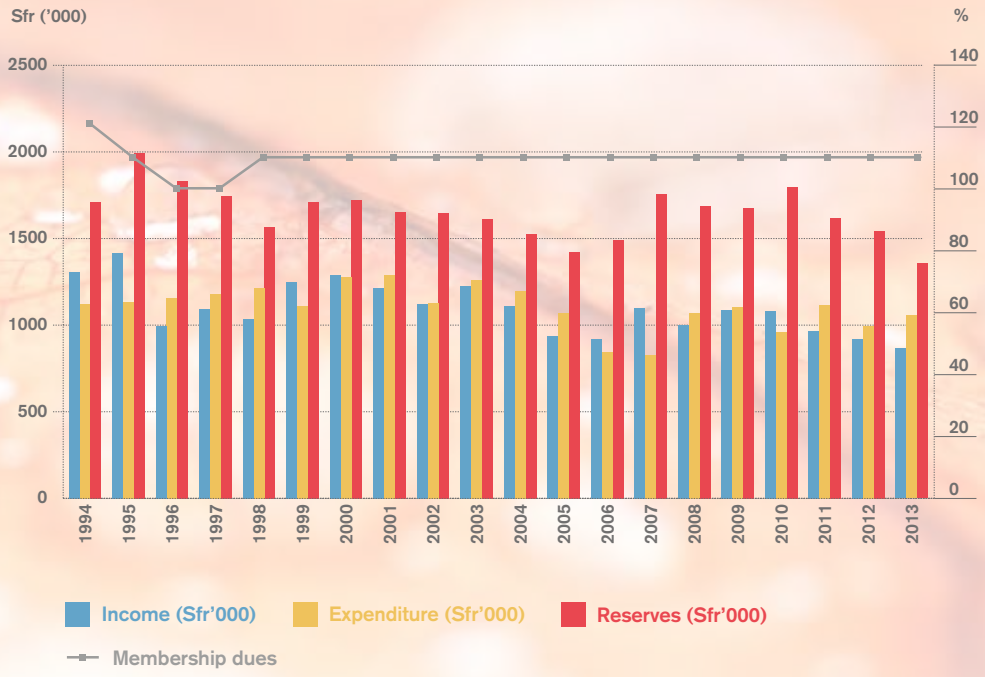
Fig. 1 – Growth and changing regional composition of the ETAD membership



Finance

ETAD is a non-profit association. The operating expenses are recovered mainly by means of payments by the ETAD members. In 2013, total income was SFr. 866'000 compared with total expenditure of SFr. 1'055'000, resulting in a loss of SFr. 189'000.

Fig. 2 – Summary of Income / Expenditure 1994 – 2013



39th General Assembly and joint meeting

39th Ordinary General Assembly

The 39th Ordinary General Assembly of ETAD was held in the Elite World Hotel in Istanbul on May 24th, 2013.

In his opening remarks Mr. Kapoor underscored the importance of ETAD as the point of integration between companies as well as a significant reference for good scientific input, which is becoming more and more important as environmental and work safety issues continue to be reported in the news.
To continue and expand its positive influence in key dyes-manufacturing countries, ETAD will work on new strategies to interest Chinese companies in the membership. Mr. Kapoor also praised the good promotional work accomplished by Dr. Hofherr in Taiwan as well as the activities of the JOC, the IOC and ETAD NA, which helped enhance ETAD's image outside Europe. The goal of promoting ETAD's presence in the general perception is going to be central also in the future.

Out of the ETAD membership of 30 companies at the time of the General Assembly, 19 were present or represented by proxy; of the current total vote entitlement of 72 votes, 59 votes were represented at the meeting (82%).

The participants approved unanimously the minutes of the 38th Ordinary General Assembly 2012 as well as the Annual Report 2012. Commenting the Annual Report, the President summarized the corresponding activities which had characterized all committees during 2012.

Dr. Jahn presented on behalf of Dr. Hochstein the financial report for 2012, which had been sent in due advance to all member companies. In 2012, total income had been SFr. 935'000 compared with total expenditure of SFr. 1'063'000, resulting in a loss of SFr. 128'000. This financial report was approved unanimously.

Dr. Jahn pointed out that, ETAD being a non-profit organization with a still substantial reserve, the loss can be well buffered and speaks for a stable situation which does not need particular interventions.

The Board proposal for the Budget 2013 and the appointment of PriceWaterhouseCoopers AG as auditors for the 2013 accounts were approved unanimously by the General Assembly.

As is customary, the Board proposal for its composition for 2013/2014 was presented to the Assembly. There were no additional nominations in response to the invitation by ETAD Legal Counsel, Dr. Uebersax.
The Board was elected unanimously as follows:

Mr. Ravi Kapoor	**Heubach Colour Pvt. Ltd.**	**President**
Dr. Clemens Grund	**DyStar Colours Distribution GmbH**	**Vice president**
Dr. Reiner Jahn	**BASF Schweiz AG**	**Treasurer**
Mr. Peter Krummeck	**Sun Chemical A/S**	
Mr. Detlef Fischer	**BEZEMA AG**	
Mr. Georg Roentgen	**Huntsman Advanced Materials (Switzerland) GmbH**	
Dr. Akio Yoshida	**Dainichiseika Color & Chemicals Mfg.**	
Dr. Rüdiger Walz	**Clariant Produkte (Deutschland) GmbH**	

Mr. Kapoor presented to the Assembly the specific goals on which ETAD will focus particularly its attention in 2013. In general, quite targeted activity on textile dyes applications will be required, due to extensive retailers' activities on restrictions, whereas pigments will have to deal with the different aspects of the nano issue as well as with the finalization of new toys standards. The ESC would start its activity and spread the Responsible Care based philosophy of ETAD, with a strategy based on building on already existing conditions to gradually achieve a tailored solution.

As regards recruiting activities, the new ETAD association models developed in 2011 were expected to be reassessed.

In his final remarks Mr. Kapoor thanked the ETAD office for the good organisation and all participants for the very active contribution both to the single and the joint meetings held during the General Assembly. In particular, the joint meeting resulted in a very dynamic discussion thanks to the possibility for members of different committees to share and compare their points of view on common issues. The participation of Board members to the sector committees had also been quite appreciated, and it was also proposed to extend their participation to the full sector meetings.

Concluding his speech, Mr. Kapoor announced that the following General Assembly would take place in Barcelona, Spain. Additionally, he already announced the intention to hold ETAD General Assembly 2015 in India.

Joint meeting of ETAD Board, DOC, POC and RAC members

The ETAD joint meeting is intended to provide an opportunity for the different committee members and the Board to gain a deeper understanding of each other's activities and discuss topics of common interest.

Prior to the joint meeting Board members also had the opportunity to take part in the specific committee meetings and learn from first-hand experience of the committees' work and approach to colorant issues. Additionally, they were able to provide their comments on crucial topics directly to the committee members which strongly affect the colorant manufacturing industry.

The joint meeting opened with the Board members providing feedback to the activities in the committees.

R. Kapoor remarked on the very important contributions of the POC members to the discussion of the quite important issues currently confronting pigments. He also praised the approval of a short-term plan for the nano issue.

Referring to the DOC activities, Dr. Grund drew the attention to the following points:

- the need of scientific-based answers to dyes-specific requirements, to which ETAD has to provide adequate solutions; this issue will be discussed in collaboration with the ZDHC group of retailers/brands;
- the growing retailers' trend for lower contents of carcinogenic aromatic amines, addressed by the DOC, in particular in regard to the Inditex group;
- the definition of crucial impurities for dyes, which had been finalized. The list of impurities, completed with an appropriate rationale, will become a part of the Guidance Document.

Additionally, Mr. Dohmen underlined the importance of using the above-mentioned committees' activities as a basis for promoting ETAD in the framework of enhancing the association's visibility.

Dr. Lawrence summarized the work the POC had been doing on the nano issue, particularly important at a time when registers of nanomaterials have become a broad phenomenon. Additionally, he announced the agreement on a reference for the total content of elements in pigments used in toys.

Dyes Operating Committee (DOC)

Dyes Operating Committee activities in 2013

Input from the RAC on new legislation provided the groundwork for several actions triggered by the corresponding implications for the dyes industry. The DOC members agreed on a common approach for ETAD member companies to comply with the new regulations.

REACH

In 2013 the European REACH concluded the second phase of registrations. ETAD member companies shared their experience in the process and discussed the different practical issues they encountered during dossier preparation.

As a crucial common issue, it was decided that the reclassification of substances following their registration should be handled at the SIEF level. The SIEF should clearly communicate the change in classification to its members, and each SIEF member should update their classification. The companies, in turn, shall communicate to their customers that the updated classification is the result of the latest information available on the substance.

In response to the requirements of REACH on cobalt salts and the absence of appropriate methods, a project was initiated for the determination of extractable cobalt in complex dyes. Solvias in Switzerland was instructed to develop an appropriate method to differentiate between Co(III) and Co(II), since the latter was added to the list of SVHC. The DOC members provided the samples to be used in the method development and contributed information from their experience with different internal methods. The ETAD method is now under final editing and will allow the ETAD member companies to test their products for compliance with REACH. Additionally, it was agreed that further testing of the robustness of this method would be funded by the DOC members plus any other interested ETAD companies.

Finally, the DOC provided updated information to the European Commission on the presence in the EU-market of C.I. Direct Black 38 and on the manufacture of dyes and colorants containing o-anisidine, which were the subject of a specific survey on the occurrence of CMR substances in articles.

REACH equivalents in other jurisdictions

Based on the European model other jurisdictions are developing their own regulations similar to REACH. Unfortunately in most cases the initial documentation is only available in the local language. The DOC offered the support of member companies' local entities as a source of short summaries of the legislation in English. Moreover, they clarified the actual implementation status and reported on issues encountered locally. This allowed every company to allocate only the required resources needed to comply with the regulations.

EN 71-3

Despite the toys standards EN 71-3 being mostly relevant for pigments, the DOC scrutinized closely the development of the chromium determination methods. Because the specific aim is to detect the two ions Cr(III) and Cr(VI) as separate species, a very sensitive method is required, which would also be of direct importance for the chromium-based metal complex dyes. At the moment, however, no suitable method has been developed to achieve this goal at the level of detection required by the Toys Directive.

Canada

In strong cooperation with ETAD North America the DOC addressed the concern that Canadian authorities required supplemental risk management measures for dyes that had already been found to have no relevant exposure in a previous evaluation. ETAD NA will follow up on this issue, and the DOC will provide all the information on the safety of their products which might help avoiding the implementation of excessive restrictions.

Retailer standards

The retailers in the Zero Discharge of Hazardous Chemicals (ZDHC) group were very active in 2013 and their projects posed the greatest impact for ETAD member companies. In particular ETAD and the ETAD member companies in the TAC (Technical Advisory Committee) of ZDHC were strongly involved in the development of a Manufacturer Restricted Substance List (MRSL), where the DOC experience with the definition of impurity limits in dyes was very useful in providing an up-to-date reference. The TAC input to the MRSL intended to give a faithful representation of the impurity profile of good products currently available on the market, and especially covered the 11 classes of hazardous chemicals highlighted by Greenpeace in its "Dirty laundry" report. The current draft of the MRSL will be submitted for comments to other third parties in order to finalize an agreed document for publication.

In this context a close cooperation with TEGEWA, which is also a member of the TAC, was maintained to achieve consistent responses from the dyes and auxiliary industries.

The DOC will continue to provide its input on the list, with the aim to have final values which, on one hand, will contribute to safer colorants and, on the other hand, are still tuned to the state of the art in good dye manufacturing.

ETAD was also invited to collaborate on the 4th revision of the Global Organic Textile Standard (GOTS 4.0), which strongly affects dyes. The DOC suggested dyes-specific comments to be put forward by ETAD.

Additionally, the Inditex standard was screened for implications for ETAD member companies. The DOC clarified some ambiguous points by direct contact with the brand and discussed the general impact of the Inditex approach to the confirmation of product safety. Since Inditex is a ZDHC member, it is important for the DOC to understand whether and how the brand's activities will merge with the common objectives of the larger group of brands/retailers.

ETAD Guidance Document

During 2013 the DOC provided its input to a new chapter of the ETAD Guidance Document, dealing with organic impurities in dyes. The chapter contains a list of concentration limits for common impurities, and it is meant to provide a recommendation for good quality products. In particular for the main application in textiles it is important to monitor the quality of all products used in the manufacturing, in order for the final textiles to comply with the different existing standards.

The chapter was also released in September 2013 as a separate document. It will be revised on a regular basis and be put continuously into the context of new legislation and Restricted Substance Lists from retailers on the one hand and scientific / technological developments on the other.

Pigments Operating Committee (POC)

In 2013 the POC was faced with various challenges related to the safe use of colorants in different applications, and in particular in sensitive applications like food contact and toys. The new issues originated both from the revisions of specific test methods and the introduction of new methods reflecting the development in analytics. The POC reacted to the challenges by supporting further cooperation between ETAD and European authorities, as well as identifying the analytical problems to be clarified by the Analytical Team. The POC also supported ETAD's participation to the ISO, since recognized sound analytical assessment methods and definitions are needed to back up national and international legislation.

REACH

An open dialogue between ECHA, associations and industry is necessary to strengthen REACH further as an effective chemical legislation, thus helping industry, downstream users and consumers.

Several years after the submission of the first dossier to ECHA with ETAD's contribution in managing the pigment consortia, the industry faced in 2013 the first compliance checks by ECHA, and the POC members are collecting and sharing their experiences.

The preparation of dossiers for the lower volume pigments to meet the final target by end May 2018 started already, and at the same time the POC members were also confronted with a particular focus on particle size and particle size distribution as both are used in the EU recommendation for a nano definition. The POC decided to include an explanation in their REACH dossiers in order to underline the potential nano status of pigments.

Nano

With the EU recommendation of a definition of nanomaterials, pigment industry still faced the question whether pigments are covered by the definition. However, even without having official test methods for this definition, the POC members concluded that it is expected for a significant number of pigments to fall under it. This is due to the fact that, in order to have the desired optical properties, the particle size distribution of pigments will very often contain a fraction of primary particles below 100 nm; this fraction, although minimal, may often be enough for the number-based definition. Therefore, as a precautionary measure, the POC members decided to evaluate the existing information on pigments on the market to check whether their safety data would stand if a classification as nanomaterials came to pass. It was concluded that, in this case, some additional studies on inhalation would reinforce the position of pigments as safe products. The ETAD office will prepare a corresponding project to be agreed upon by the POC members.

Parallel to the EU activities, also single countries started local initiatives for nano inventories, most prominently France, Denmark and Belgium. The POC discussed the best strategy to deal with the different inventories, and even provided direct assistance to the development of the Belgian inventory through the ETAD office. In France some companies registered their products, although they specified with a disclaimer that it was a precautionary approach, since the status of pigments was still undecided. In Belgium, thanks to the information provided by ETAD, pigments were exempted from the registration. The Danish inventory is still a draft, and has a different scope than the other ones, focusing on articles sold to the general public. Future POC actions will depend on the outcome of these national projects.

Sensitive applications

Toy safety

In the scope of toys safety ETAD participated also in 2013 in the standard working group for EN 71 representing the pigment industry. EN 71-3 is now in force despite the deficiencies in testing, in particular as regards chromium. In order to assist its companies to deal with the newest limits required for toys, ETAD collected the input of the POC members on typical products used for this application and prepared a guidance document, also published on ETAD's website. The document contains a set of limits for elements in pigments, expressed as total concentrations, which are calculated based on the Toys Directive limits in toys. This reference will help toy manufactures to assess the conformity of their toys with the TSD requirements.

Food contact legislation

Two application areas are currently regulated: Application in plastics is regulated on an EU level by Commission Regulation (EU) No. 10/2011, whereas printing inks are regulated on a national basis. Both regulations ask for standardized test methods for the assessment of not intentionally added substances (impurities).

Commission Regulation (EU) No. 10/2011, or PIM (Plastics Implementation Measures) does exclude colorants from appearing on the union list of authorized substances; only general requirements have to be fulfilled. However, the status of additives used in conjunction with pigments was not clear, and the issue was examined by the POC members, who came to the conclusion that pigment additives are not covered by the regulation either. A further challenge in the regulation is the ban of all nanomaterials unless specifically authorized, which could have heavy repercussions on pigments depending on their final classification as regards their nano status. ETAD met with EU authorities already in 2012 to discuss the issue, which is still open.

The German printing ink ordinance exists at the moment as draft only. ETAD, in close collaboration with EuPIA (European Printing Ink Association) provided the input of the POC members to the various drafts of the ordinance, in order to strike a balance between the interests of authorities, industry, downstream users and consumers. For direct food contact the German ordinance only allows pigments which have already been evaluated for this application, using as a reference the List A in the similar Swiss regulation.
In order to expand the list, the POC decided to check the data gathered for the REACH registration of other suitable pigments and see whether industry could provide enough information on their safety for an inclusion into the list of allowed components for printing inks.

Tattoos

The increasing diffusion of tattoos among the world population triggered in 2013 a number of national and international initiatives, which unanimously recognized that all the ingredients and practices linked to this application needed a closer scrutiny. Since organic pigments are a basic component of tattoo inks, the POC members already have a long standing policy of not recommending their products for this purpose. After having considered the newest available data about the metabolism of tattoos in the human body and the progress in laser removal techniques, the committee confirmed its position that there is not enough information to guarantee that pigments on the market are fit to the purpose. However, it was agreed that ETAD should provide its assistance to selected projects aimed to improve the knowledge about the safety of tattoos, nevertheless always clarifying the absence of ETAD companies from the corresponding market.

Analytics

Only with robust methods, tailored to the pigments' specific characteristics, is it possible to answer regulatory questions precisely. Additionally, the POC and ETAD always have to consider how the results should be communicated to their customers and how the corresponding collaboration should be structured. These topics are the scope of the analytical group.

In 2013 ETAD's analytical team, composed of experts from the member companies (see box below), was particularly active in developing or updating test methods for pigments. Current focus of the activities were the determination of specific NIAS (not intentionally added substances), which might be present in pigments or are generated during processing or application of pigments at the downstream users level. Methods for the determination of PAAs and PCBs are particularly important at the moment, because of the increasing regulatory interest in the purity of pigments used in sensitive applications. The methods are expected to be finalized and published in 2014.

Analytical Expert Team members

Dr. Rainer Az	Clariant Produkte (Deutschland) GmbH
Dr. Poul Møller	Sun Chemical A/S
Dr. Thomas Wagner	Heubach GmbH
Dr. Edith Wieser	BASF Schweiz AG

Regulatory Affairs Committee (RAC)

The Regulatory Affairs Committee met three times in 2013 and welcomed Ms. Jana Strachonova (Synthesia) as a guest member, hoping that she will become a regular member of the committee. Between meetings the RAC members maintained a flow of information ensuring awareness of emerging and changing global legislation together with its impact and interpretation. One of the most important aspects of the RAC work is the exchange of ideas and analysis of common problems together with a crucial comparison of progress regarding developing legislation.

GHS

Meanwhile the 5th revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) was released (September 17th, 2013).

It is anticipated that, when implemented, GHS will

- enhance the protection of human health and the environment by providing an internationally comprehensible system for hazard communication;
- provide a recognized framework for those countries without an existing system;
- reduce the need for testing and evaluation of chemicals; and
- facilitate international trade in chemicals whose hazards have been properly assessed and identified on an international basis.

Although GHS aims at harmonized classification criteria and harmonized hazard communication it remains a building block system, i.e. consistent with the building block approach the full range does not have to be adopted. Classifications can still vary from country to country.

China and the USA, two countries with an already significant chemical legislation, adopted GHS in recent times, and the corresponding implementation is ongoing. By publishing two new and 26 revised mandatory national standards on classification and labelling China aligned its classification and labelling requirements with the fourth revised edition of GHS. The standards will come into force on November 1st, 2014.
The new standards have adopted all of the elements (building blocks), under the fourth revised version.

On March 26th, 2012 the U.S. Department of Labor published its final rule for OSHA's adoption of GHS (Globally Harmonized System). Due to the massive undertaking this change precipitates in determining hazards associated with chemical substances and mixtures, OSHA has allowed for a transition period until June 1, 2015. During this transition period, US companies may operate under the former Hazard Communication Standard and/or the new GHS Hazard Communication Standard.

Similarly, there are many other countries where the GHS implementation is in different stages. The RAC constantly updated and distributed the corresponding information and will continue these activities in 2014.

REACH

The second REACH milestone was passed on May 31st, 2013, which was the deadline for filing the registration dossiers for substances with volumes of 100 – 1000 t. At the same time registrants received from ECHA extensive catalogues of questions for certain previously registered substances (volumes >1000 t) especially relating to substance characterization (granulometry). The RAC continued in assisting the ETAD Secretariat following requests from ECHA and other agencies for information on substances of concern and their possible use in colorant synthesis. Currently 151 substances are included in the SVHC (Substances of Very High Concern) candidate list whereas Annex XIV contains 22 substances.

Additionally, other extra-European countries, e.g. Turkey and Korea, are setting up REACH-like legislation, whose developments have to be followed.

Through the RAC, all ETAD members received updated details on the legislations status, including deadlines, translations and guidance documents. The RAC members also shared and communicated to the other ETAD committees their experiences on practical aspects of the implementation of existing systems, providing unified solutions to common issues.

Guidance to the Code of Ethics

The ETAD Guidance Document is the crucial tool assisting member companies to comply with the Code of Ethics. Therefore it is essential that the Guidance Document reflects the latest developments in global regulations, particularly the ones affecting the hazard/risk characterization of substances and corresponding labeling. Continuation of the necessary update of the document was one of the main challenging activities of the RAC in 2013.

Meanwhile the DOC published limits for certain impurities which may be present in dyes, making reference to existing regulations on the one hand and to the stringent requirements of standards of retailers, customers etc. on the other hand. The RAC proposed to include the recommendation for dyes also in the Guidance Document, which was approved. The revision is expected to be completed during 2014.

Nanomaterials

In October 2011 the EU Commission published a Recommendation on the definition of a nanomaterial. This recommendation is not yet approved by the member states and no overall unified measurement method is yet been defined and published. The whole issue is a complex matter and discussions are still on-going and far from being finalized. However there is evidence that, based on the currently available data, a certain number of organic pigments might fall under this definition and might be regarded as nanomaterials in future. ETAD will continue to monitor the practical impact of this definition and to propose feasible approaches for organic pigments.

In addition the situation is complicated by single EU member states initiating the setup of national nano products register. In France such a nano register-covering organic pigments and more or less the whole supply chain beside articles – entered into force in 2013. Planning a similar register the Belgian authorities decided to exclude naturally occurring and incidental nanomaterials, as well as pigments from the notification requirement. Denmark plans a national product register only covering mixtures and articles containing nanomaterials which are sold to the general public. Last but not least the European Commission is considering an EU Nano-register.

The RAC carefully checked the requirements of the different registers as regards colorant manufacturers, since they imply or would imply a different involvement and different duties, also affecting further ingredients of commercial products (e.g. fillers).

2009/48/EC (Toy Safety Directive) / EN 71-3

The Toy Safety Directive (2009/48/EC) specifies maximum migration limits for three categories of toy materials. The limits for the migration of 19 elements are expressed in milligram per kilogram toy material. The purpose of the limits is to minimize children's exposure to certain potentially toxic elements.
The European Standard EN 71-3 implements the heavy metal limits as laid down in the corresponding Directive and entered into force in July 2013.
It specifies requirements and test methods for the migration of the above mentioned 19 elements from toy materials and from parts of toys.

It turned out that simply passing the onus on providing data up the supply chain does not solve the compliance problem.

The ETAD approach recommending total heavy metal values for the 19 heavy metals in organic pigments intended for the coloration of toys was well accepted by the down stream users. The RAC also proposed to update the list of metals in the ETAD Guidance, taking in consideration the limits in toys and food contact applications. The project will be carried on in 2014 upon approval of the POC.

Voluntary standards relating to azo colorants in Japan

Meanwhile in Japan several voluntary standards relating to azo colorants were established by the Japan Textile Federation (JTF) as well as by the Japan Leather and Leather goods Industries Association (JLIA) taking into account already existing laws / regulations in the EU or China.

Although these standards are not legally binding downstream users like dye houses, retailers etc. are expected to comply with them according to the corresponding test methods.

Based on these standards, discussion towards legislation is ongoing between the authorities and JFT.

The RAC will follow closely the development of the standards, which are quite relevant for the dyes manufacturers.

ETAD North America (ETAD NA)

Based in Washington, DC, ETAD North America (ETAD NA) represents the global dyes industry to the North American government agencies, industry groups and trade associations, media, academic and research organizations, and public. ETAD NA coordinates with the ETAD office in Basel to serve the North American member companies by monitoring regulatory and industry developments, facilitating networking opportunities, and disseminating information concerning the environmental, health and safety aspects of the North American dyes industry.

Regulatory developments in the United States

ETAD NA monitored the following U.S. regulatory developments in 2013, which were of particular interest to member companies:

- The Chemical Safety Improvement Act (CSIA) was introduced as legislation to reform and improve chemicals management under the old Toxic Substances Control Act (TSCA). Following the death of Senator Lautenberg, the lead Democrat author of the bill, much of the year was spent in deciding who would assume Democratic leadership of the effort and in public hearings as politicians, industry, and the public debated the merits of the proposed legislation.
- The Globally Harmonized System for Classification and Labeling (GHS) was in effect with implementation of training (for labeling and safety data sheets) to be completed by December 1st, 2013.
- Members completed a review of the latest draft OECD Emission Scenario Document (ESD) on textile dyeing, to which ETAD NA had first contributed in 2011. The ESD is understood to be used eventually by EPA for evaluating pre-manufacture notices.

Regulatory developments in Canada

The Canadian government continued a class assessment of aromatic azo- and benzidine-based substances in order to set risk management priorities under Canada's Chemicals Management Plan. Draft screening assessments on benzidine-based dyes and related substances were released for public comment on June 15th, 2013. ETAD NA agreed that the assessments were favorable and submitted comments in support of the proposed conclusions.

A second set of draft screening assessments was released in November on azo disperse and azo solvent dyes. ETAD NA found those assessments troubling because of the many inconsistencies and contradictions in such aspects as classification of toxic under CEPA Section 64, potential environmental exposures, aquatic toxicity potential, and proposed risk management measures. ETAD NA filed comments to that effect by the deadline of December 31st and was granted the opportunity to file further comments by January 31st, 2014.

Members continued to monitor progress on the second phase of Canada's update of its chemical inventory, the Domestic Substances List.

Canadian authorities have published draft guidelines in the *Canada Gazette* for implementing GHS in Canada. The timetable is the same as in the U.S.

Chemical testing programs

ETAD NA continued to monitor developments in various governmental testing programs that could impact the ETAD NA member companies. EPA continued to evaluate the final reporting of data that was submitted for Leuco Sulfur Black 1 in compliance with the test rule for the second group of High Production Volume (HPV) chemicals. The test rule on the fourth group of HPV chemicals, which was proposed in 2011, still was not published as a final. That test rule remained a concern to ETAD NA because of the possible precedent-setting provision for using the Significant New Use Rule (SNUR) under TSCA Section 5 for obtaining test data where insufficient exposure-based justification existed.

No further developments impacting ETAD NA members occurred in EPA's endocrine disruptor screening program.

ANSI Voluntary Sustainable Textiles Standard

ETAD NA continued to monitor developments under the ANSI Commercial Furnishings Fabric Sustainability Standard, which became effective in 2011, but there was no activity of interest to report.

Sustainable Apparel Coalition

ETAD NA monitored developments with this group of leading apparel and footwear brands, retailers, manufacturers, NGOs, and the EPA who are working together to reduce the environmental and social impact of apparel and footwear products sold around the world.

Voluntary Product Environmental Profile (VPEP)

The American Apparel and Footwear Association (AAFA) funded efforts to develop an electronic format of the Voluntary Product Environmental Profile (VPEP). A vendor was selected who should complete a product linking to customer and supplier databases in 2014. ETAD NA communicated the details of the project to the ETAD office, in order to propose it for discussion in the DOC.

Residual dyes in containers

ETAD NA continued its effort to seek revision to EPA's unrealistic default assumptions about the amount of residual dyes remaining in containers after use, which is an issue primarily under the new chemicals program. In support of this effort, members have collected and analyzed data from samples of residual dye in empty drums from customer facilities. The results demonstrate that actual residual concentrations are well below EPA's default values of 1% for powder and 3% for liquid dyes. A narrative summary and tables of data are being prepared for presentation to EPA.

Chemicals in Products project of the UN Environment Programme

In December 2013 Dr. Helmes represented ETAD at a consultation meeting in Boston for the project Chemicals in Products of the United Nations Environment Programme (UNEP). ETAD has been participating from the beginning in this project and provided the feedback from the manufacturers' point of view on the current information flow in the value chain. During the meeting, Dr. Helmes discussed with the other participants the possibility of developing guidelines for exchanging information on the presence of chemicals in products, with the specific goal to improve the access of consumers to key indications relevant for their health and safety.

NIOSH

ETAD NA contributed information on limited exposure and use to a report on the dye intermediate 2-methoxy-4-nitroaniline (CAS 97-52-9). The report, prepared by a contractor for a study conducted by the National Institute of Occupational Safety and Health, was submitted to the Institute but nothing further was communicated about the status of the study.

ETAD NA Membership

The ETAD NA office continued to field inquiries from U.S.-based dye formulators interested in joining ETAD as Associate Members. None joined however because of concern about the fee of Sfr. 10,000/year being too high. The ETAD Board rejected ETAD NA's support for a new category of limited membership in North America only, for which U.S. and Canadian based dye formulators would be eligible at a lower fee.

Indian Operating Committee (IOC)

This year a quite fruitful year for the IOC, with the main concentration on two issues: on one hand, the interaction with the Bureau of Indian Standards (BIS) and participation in the standard setting process for pigments and dyes, on the other hand the activities of the ESC. Still on the radar were also the monitoring of legislation and standards which could affect Indian colorants manufacturers.

Strengthening of IOC's and ETAD's relation with BIS (Bureau of Indian Standards)

The IOC members discussed the details of BIS standards under revision, and provided the Bureau with active support and information for harmonizing them. Specifically, inputs were provided by the IOC on paint-related standards, as well as ETAD test methods for primary aromatic amines and PCBs, to be included in the revised IS 9833 standard. In this regard, Mr. Sevak (Heubach) represented the IOC at the CHD 20 meeting held in Kolkata in March 2013. This interaction and support culminated in a final draft which was circulated before publication. It is now expected that the official standard IS 9833 will be published in the first quarter of 2014.

ETAD has now been accepted as an authority providing information on international standards on dyes and pigments related matters, which would be further strengthened by the interaction with BIS in the forthcoming standards revisions, to which IOC members will actively participate. In a recent seminar, Ms. Chitra Gupta, representing BIS, reiterated that BIS acknowledges ETAD's expertise and looks forward to continuing the collaboration through the IOC.

Environmental Sustainability Committee

Further emphasis on environmental sustainability issues was accomplished under the presidency of Mr. Kapoor. ETAD attracted the attention of Gujarat government and is recognized by the Gujarat Pollution Control Board (GPCB). The GPCB is the pollution controlling authority in Gujarat state and is the first agency in the country to offer benefits to industries which adopt Responsible Care Management System. ETAD's collaboration with the GPCB's association was reinforced by the willingness of Mr. Hardik Shah, GPCB's Member Secretary, to be a guest member of ETAD's Environmental Sustainability Committee. The committee's activities will provide support to the Gujarat region, which accounts for 75% of the dyes and pigments manufactured in India. This synergistic association and sharing of data will address all concerns of colorants manufacturers on environmental themes.

The highlight of the year was the event in Mumbai, India. The full program started with the introduction of the ETAD Board and the IOC members and was followed by the official welcome of Mr. Shah to the ESC. After that a symposium on waste management issues facing the colorant industry took place, with Mr. Kapoor introducing the topic with a brief overview.

After an introduction by Dr. Hofherr to the activities of ETAD and of its Environmental Sustainability Committee, the symposium moved on to some specific presentations:

- Dr. Sunil Deval (Clariant) focused his talk on current waste management issues for pigments producers;
- Dr. Mujeeb Ur Rahman (Atul) gave an update on the waste management issues for dyes producers;
- Mr. Ulhas Nimkar (Texanlab Laboratories) reported on the current trends in waste management and the impact it has on the colorant industry;
- The chief guest, Mr. Shah, reported on the issues related to waste management that the state has already addressed, and specifically the measures taken to control the issues. He additionally expressed full support to ETAD's goal to find solutions which are also viable for the colorants industry.

The afternoon session included a seminar on Responsible Care "A Solution for Growth of Chemical Industry" organized in collaboration with the Indian Chemical Council. A quite gratifying part of the seminar was the announcement that the Government of Gujarat had recognized the Responsible Care initiative as an essential tool for the growth of the chemical industry and had agreed to give a special status to companies who are Responsible Care certified and audited. The status would convey an extended tenure for their consent permission for the manufacture of colorants. This is a key regulation which put RC companies on the fast track with respect to applications, a first of its kind in India which hopefully will start a trend also by other state pollution control boards.

Regulations and standards

The revision or the publication of regulations and standards is followed closely by the IOC members, in particular for opportunities to become involved and provide their specific feedback.

The topic was also underlined during the Mumbai event by a series of specific presentations:

- Ms. Chitra Gupta, Secretary PCD12, BIS, gave an overview of the specific process that the Government takes and how the regulations and standards are formed, including the time frame and procedures;
- Mr. Ulhas Nimkar, with his presentation "Future Trends and Regulations for Colorants", informed the audience of current developments in the international field;
- Dr. Hofherr followed this with "ETAD focus of 2013-14" and summarized for the audience the key areas that would be addressed in the coming year;
- Dr. Grund, Vice President of ETAD, made a presentation on eco-monitoring of textile dyes using disperse dyes as an example, and highlighted the current issues faced by the dyes industry which are likely to have far reaching impact in the future;
- Mr. Sanjeev Bansal, Technical Director of the Flint Group in India, closed the session with a presentation on requirements for food packaging inks.

All presentations were received quite well, and the intensive Question & Answer session that followed brought about a very fruitful atmosphere of information exchange, with the participants addressing in detail the different topics.

As regards textile standards, the IOC followed closely and commented on the Manufacturers Retailer Substance List developed by ZDHC. The standard, still in a draft form, is expected to affect strongly also Indian manufacturers. Therefore it is quite important that they can contribute to align the document to the actual specifications which responsible manufacturers worldwide can offer.

Similarly, the IOC input on the 4th revision of the GOTS was incorporated into ETAD's feedback to the standard and will be considered in the final publication.

Japanese Operating Committee (JOC)

The Japanese Operating Committee has been operating since its re-activation in 2010. The committee is formed by representatives of ETAD member companies present in Japan, with active participation since December 2012 of a new member company, Heubach Japan, represented by Mr. Matsumoto.

Based in Tokyo, the committee monitors the regulatory situation for pigments and dyes in Japan, and works in close communication with the ETAD office in Basel.

Collaboration with JDICA

In September 2013 the JOC organised in collaboration with JDICA (the Japan Dyestuff and Industrial Chemicals Association) a joint assembly with the participation of Dr. Hofherr and Dr. Grund (ETAD's Executive Director and Vice President, respectively). The Assembly was very informative and useful thanks to the exchange of fresh information on eco/ toxicological issues both globally and locally. Two specific presentations were held by the representatives of ETAD:

- ECO monitoring of Textile Dyes Dispersion as an example – Disperse Dyes (Dr. Grund);
- ETAD focus 2013 – Overview of activities on key issues (Dr. Hofherr).

More than forty participants from JDICA member companies were present and found the presentation of great interest and very informative, particularly as regards the various fields in which ETAD is active.

PCBs issue

At the end of 2013 a common BAT value for PCBs in pigments was still not determined. The first bottleneck leading to this impasse was an analytical problem already recognised in 2012. The JOC member companies had worked on this issue in close collaboration with JDICA, and recognized that, for low chlorinated biphenyls (mono- or di- chlorinated), the method adopted by JDICA, with a direct dissolution into sulphuric acid, brought markedly lower results in comparison to a method involving solvent wetting.

This concern was communicated to METI, which released an administrative guidance for re-analysis of some organic pigments and required Japanese M/I to report the results by end of February 2013. The organic pigments requiring re-analysis with the solvent wetting method were those likely to contain mono- or di-chlorinated biphenyls. The compiled results of re-analysis were published in May 2013, and can be summarized as follows:

- 242 pigments were reported;
- PCBs over a 50 ppm concentration were detected in 9 more organic pigments;
- All of them were di-arylide yellow or orange pigments;
- In total 17 pigments out of 588 were found to contain over 50 ppm PCBs.

However, the third and final meeting of the study committee on risk assessment of by-product PCBs in organic pigments, held in March 2013, concluded that "No unacceptable adverse effects to human health and/or environment are likely to be caused by the products that contain organic pigments including incidental PCBs. Therefore it is not necessary to take additional measure like recalling the secondary products."

The second bottleneck for the final decision on a BAT value was the suspension of the BAT committee from February to December 2013 due to a massive change in the officers in the MHLW, the MOE as well as in the BAT committee itself. Finally, the 6th hearing by the BAT committee was re-started in December. They will have the 7th hearing in January 2014, and are expected to draw a conclusion in the first quarter 2014.

The JOC will continue its communication with the authorities and report back to the other ETAD members.

Nanomaterials regulatory situation

In Japan there still are no laws or ordinances which regulate nanomaterial directly. However, administrative guidance was provided to manufacturers, who introduced voluntary monitoring in order to guarantee workers and environmental safety.

Different projects, which were launched already in 2011 by the Ministry of Economy, Trade and Industry (METI) are in progress and focus on the determination of reliable methods for the safety assessment of nanomaterials, as well as their safe management. Additionally, the international project "Development of safety evaluation technology for nanomaterials" was started, with the aim to develop methodologies which are simple and not excessively resource-consuming, both for the substance/hazard evaluation and the hazard assessment of substances.

The JOC is following this project closely, and decided to coordinate its activities with the German Industrial Technology Research Institute, which is also a project member.

Japan's Chemical Substance Control Law

Under the Abe administration, the Japanese Cabinet pursued regulatory reform plans including the overhaul of the new chemical notification regime under the Chemical Substance Control Law (CSCL). In response to a strong case made by the chemical industry bodies, the competent authorities decided to discuss possible amendments to the following items:

- ***Thresholds for smaller volume exemptions that are permitted to each applicant company***
  The CSCL has provided two types of volume exemptions:
  1. Small Volume Exemption (SVE) for a substance up to 1 MT per year in a total of all SVE submitters and
  2. Low Volume Exemption (LVE) up to 10 MT per year of a substance in a total of all LVE and SVE submitters. That is, if multiple companies apply smaller exemptions for a substance, the authorities allocate the total allowable quantity to all applicants. Chemical industry bodies have sought for change of the thresholds for SVE and LVE to 1 MT/yr and 10 MT/yr respectively for each one of applicant instead of all applicants.
- ***Number of submission windows for Small Volume Exemption (SVE)***
  Currently submission windows open only four times a year. Increasing the number of windows has been sought by industry bodies.
- ***Notification scheme for new chemical substances***
  The authorities have aimed to streamline the current scheme by adopting scientifically reasonable methods.

New developments are expected by the end of fiscal year 2013.

Environmental Sustainability Committee (ESC)

The Environmental Sustainability Committee met two times in 2013, with the May meeting being held during the ETAD General Assembly in Istanbul. The ESC's objective is to assess the impact of colorants on the environment, both during their manufacture and during their application, and to provide information on how to minimize it. An updated overview of international effluent standards was presented and discussed, with particular attention to the limit values set in different regulations worldwide and the corresponding varying degrees of enforcement. One of the most important aspects the ESC is working on is the exchange of ideas and the analysis of common problems together with a detailed comparison of global legislations.

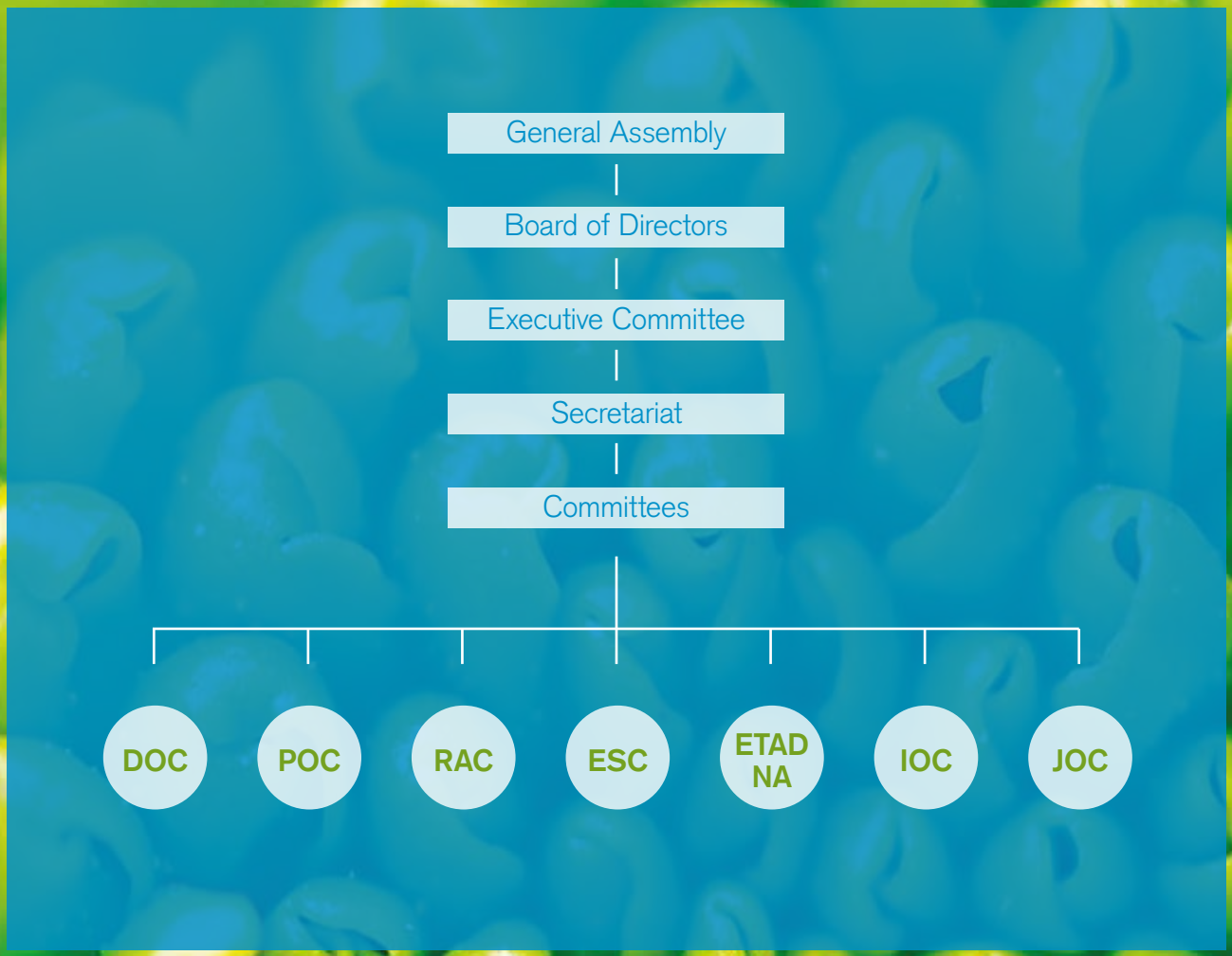
As a first project, the ETAD secretariat will compile an overview of current key environmental issues for later sharing among ESC members. This document will serve as basis for expert discussions on how to solve those issues. In addition ESC members will share the limit values of important effluent parameters, monitored at the production sites in the countries where ETAD companies are manufacturing their colorants:

- True colour (colour of water)
- COD
- BOD
- Ammoniacal nitrogen
- Phosphate
- TDS (total dissolved solids)
- TSS (total suspended solids)

ETAD, through its ESC, will create a pilot project to identify relevant technologies able to help fulfil the stringent norms of discharge and further improve the responsible care activities of the companies. This activity will be extended to all the countries and manufacturing units, particularly where an updating of existing practices is needed. The ESC will discuss the next steps of the pilot project in its coming meetings.

A further ESC project is the definition of specific parameters needed to perform a Life Cycle Assessment for dyes and pigments; the results of this project would be beneficial especially for the member companies which have a limited experience with LCAs.

Organisation chart



Information and external activities

Position papers and comments

ETAD NA Comments on Subgrouping Approach and Background Information for the Screening Assessment of Aromatic Azo and Benzidine-Based Substances, Chemicals Management Plan
(submitted to the Ministries of Environment and Health, Canada, in February 2013)

ETAD element limits for pigments in toys
(published online in August 2013)

ETAD NA Comments on Draft Screening Assessment Reports on Benzidine-Based Dyes and Related Substances, Chemicals Management Plan
(submitted to Ministries of Environment and Health, Canada in August 2013)

ETAD recommendation for threshold limits on organic impurities in dyes
(published online in September 2013)

ETAD NA Comments on Draft Screening Assessments for Azo Disperse Dyes and Azo Solvent Dyes, Chemicals Management Plan
(submitted to Ministries of Environment and Health, Canada in December 2013)

Press releases and other publications

ETAD updates list of dyes impurities for textile applications
(published in Chemical Weekly, August 2013)

ETAD publishes textile dye impurity limits
(published in Ecotextile News, September 2013)

Chemical lists in retail and regulation – An international perspective
(Article by Dr. Hofherr, published in Chemical Industry Digest, December 2013)

ETAD Highlights
(bi-monthly information leaflet for ETAD members)

ETAD's brochure
(overview on ETAD's structure, membership and current activities, regularly updated and distributed at external events)

External activities

During 2013, ETAD continued or started activities in different projects with external groups and associations. The most relevant collaborations included:

- Participation to the UNEP project Chemicals in Products
- Participation in the development of the new Toys Standards EN 71, with focus on finger paints and elements content, as well as corresponding analytical methods
- Participation in the Zero Discharge of Hazardous Chemicals (ZDHC) group as representative of the colorants manufacturers
- Collaboration with Health Canada on the class assessment of benzidine and azo dyes
- First contact with ISO groups dealing with pigments standards
- Study on residual dyes in containers with the US EPA
- Input to the nano debate and corresponding national and international activities
- Collaboration with the Japanese METI on the PCBs issue
- Collaboration with EuPIA and the German authorities on the topic of PAAs in napkins
- Monitoring of the tattoos-related regulation updates and related activities from interested groups
- Participation in the EURATEX REACH conformity group
- Participation in the Colour Index Executive Board

Further information on the most relevant topics can be found in the single committees' reports.

Board

President
Mr. Ravi Kapoor
Heubach Colour Pvt. Ltd.

Vice President
Dr. Clemens Grund
DyStar Colours Distribution GmbH

Treasurer
Dr. Reiner Jahn
BASF Schweiz AG

Mr. Peter Krummeck
Sun Chemical A/S

Mr. Detlef Fischer
BEZEMA AG

Mr. Georg Roentgen
Huntsman Advanced Materials (Switzerland) GmbH

Dr. Akio Yoshida
Dainichiseika Color & Chemicals Mfg.
(with Mr. Toshifumi Hori as deputy)

Dr. Rüdiger Walz
Clariant Produkte (Deutschland) GmbH

ETAD staff*

Basel
Dr. Walther Hofherr
Executive Director

Dr. Pierfrancesco Fois
Deputy Executive Director

Mr. Bertil Hanke
Project Manager

Dr. Gecheng Xie
Senior Consultant

Washington
Dr. C. Tucker Helmes
Executive Director of ETAD North America

Trustee and accounting
Mr. Reto Hubli
Fidares Treuhand

Ms. Marianne Flückiger
Fidares Treuhand

Legal Counsel
Mr. W. Richard Bidstrup
Legal Counsel of ETAD North America
Cleary, Gottlieb, Steen & Hamilton

Dr. Hans-Rudolf Uebersax
Legal Counsel of ETAD International

** This list gives the staff composition as in April 2014*

Committee members**

Dyes Operating Committee

Mr. Mark Dohmen	M. Dohmen GmbH
Dr. Klaus Hannemann	Huntsman Advanced Materials (Switzerland) GmbH
Dr. Sibel Kılıç	Setaş Kimya Sanayi A. Ş.
Mr. Richard Lee	European OGD Ltd.
Ms. Jana Minarikova	Synthesia a.s.
Ms. Carole Mislin	Archroma Management GmbH
Dr. Elena Schramm	BEZEMA AG
Mr. Mehmet Şener	Setaş Kimya Sanayi A. Ş.
Dr. Anette Weber	DyStar Textilfarben GmbH & Co.

Regulatory Affairs Committee

Dr. Alfred Dratva	BASF Schweiz AG
Dr. Margret Jobelius-Korte	TFL Leather Technology Ltd.
Mr. Gary Peart	FUJIFILM Imaging Colorants Ltd.
Dr. Erich Schultz	DyStar Colours Distribution GmbH
Mr. Emmanuel Fauster	Huntsman (Switzerland) GmbH
Dr. Helga van Wyk	BASF Schweiz AG
Dr. Detlev Wormsbächer	Clariant Produkte (Deutschland) GmbH

Pigments Operating Committee

Dr. Karin Beck	BASF SE
Dr. Annick D'hulst	Cappelle Pigments n.v.
Mr. Sinan Edil	Setaş Kimya Sanayi A. Ş.
Ms. Daniela Finkenauer	Heubach GmbH
Mr. Ivan Grønning	Sun Chemical A/S
Mr. Toshifumi Hori	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Mr. Hiromichi Iwata	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Dr. Klaus Kund	Clariant GmbH
Ms. Jana Minarikova	Synthesia a.s.
Dr. Robert Mott	Sun Chemical Corp.
Mr. J. I. Sevak	Heubach Colour Pvt. Ltd.
Dr. Peter Simmendinger	BASF Schweiz AG
Mr. Kikuo Tsuchiya	DIC Corporation
Dr. Ulrich Veith	BASF Schweiz AG
Mr. Daniel Ymbernon	Daicolorchem EU, S.A.

Environmental Sustainability Committee

Mr. Ivan Grønning	Sun Chemical A/S
Mr. Ravi Kapoor	Heubach Colour Pvt. Ltd.
Dr. Sibel Kılıç	Setaş Kimya Sanayi A. Ş.
Ms. Carole Mislin	Archroma Management GmbH
Dr. Siva Pariti Rama Kumar	Dystar India Pvt. Ltd.
Mr. Georg Roentgen	Huntsman Advanced Materials (Switzerland) GmbH
Mr. Mehmet Şener	Setaş Kimya Sanayi A. Ş.
Mr. J. I. Sevak	Heubach Colour Pvt. Ltd.
Mr. Toshifumi Hori	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Dr. Mujeeb Ur Rahman	Atul Ltd.

ETAD North America

Dr. Shelly P. Bravard	Huntsman Corporation
Mr. Scott Chen	Everlight USA, Inc.
Ms. Carole Mislin	Archroma Management GmbH
Dr. Joseph DaSilva	DyStar L.P.
Mr. Marvin Davis	Everlight USA, Inc.
Mr. Mark Ellsworth	Sensient Colors Inc.
Dr. David Hay	Huntsman Corporation
Ms. Sue Ann McAvoy	Sensient Colors Inc.
Ms. Mary F. McCoy	BASF Corporation
Mr. Jeff Morris	Sensient Colors Inc.
Mr. Pat Tilli	Clariant (Canada) Corp.

Indian Operating Committee

Dr. Pankaj Desai	Colourtex Industries Pvt. Ltd.
Mr. Ravi Kapoor	Heubach Colour Pvt. Ltd.
Mr. P. S. Kulkarni	Jay Chemical Industries Ltd.
Mr. P. A. Murali	Clariant Chemicals (India) Ltd.
Dr. J. M. Nair	Sudarshan Chemical Industries Ltd.
Dr. Mujeeb Ur Rahman	Atul Ltd.
Dr. Pariti Siva Rama Kumar	Dystar India Pvt. Ltd.
Mr. Tirtha Ghosh	Huntsman International (India) Pvt. Ltd.

Japanese Operating Committee

Mr. Yasuyuki Ayukawa	Toyocolor Co., Ltd.
Mr. Toshifumi Hori	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Mr. Hiromichi Iwata	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Mr. Osamu Kawakita	Clariant (Japan) K.K.
Mr. Naoki Koide	Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Mr. Yasumasa Matsumoto	Heubach Japan K.K.
Mr. Makoto Sakamoto	Toyocolor Co., Ltd.
Mr. Kikuo Tsuchiya	DIC Corporation
Ms. Kayo Yamada	BASF Japan Ltd.
Dr. Akio Yoshida	Dainichiseika Color & Chemicals Mfg. Co., Ltd.

*** These lists give membership as in April 2014*

Code of Ethics

Preamble

The aim of ETAD is to minimize possible negative effects on health and the environment arising from manufacture and use of synthetic organic colorants and to ensure information on the best practicable protection is provided to the purchasers of these products.

To achieve this goal and to promote the image of a responsible and safety minded manufacturing industry, it is necessary that in all aspects related to human and environmental safety, members be encouraged to adhere worldwide to a high ethical standard.

Therefore, at the proposal of the Board, the General Assembly of ETAD approves this Code of Ethics as a key policy of the Association. All ETAD member companies are obliged to comply with this Code of Ethics.

1. Principles of responsible care

ETAD members are committed to support a continuing effort to improve the industry's responsible management of synthetic organic colorants. Members shall develop, produce and distribute products in a responsible manner which protects human health and the environment from unacceptable risks during manufacture, transport, use and disposal. Specifically, members shall implement a responsible care program in which the member undertakes to manage its business in accordance with the following principles:

- To recognize and respond to any community concerns about synthetic organic colorants and its manufacturing operations;
- To produce only synthetic organic colorants that can be manufactured, transported, used and disposed of safely;
- To make health, safety, employee training, quality assurance and environmental considerations a priority in planning for all products and processes;
- To provide employees, distributors and customers information on the health or environmental effects of synthetic organic colorants and recommend appropriate protective measures to ensure their safe use, transportation and disposal;
- To operate all facilities in a manner that protects the environment and the health and safety of employees and the public;
- To promote research on the health, safety and environmental effects of its products, processes and waste materials;
- To cooperate with public authorities in establishing well-founded environmental, safety and health regulations; and
- To promote these principles of responsible care to others who produce, handle, use, transport or dispose of synthetic organic colorants.

The responsible care program shall fulfil, but not be limited to, the specific obligations described under paragraphs 2-5 below.

2. Product Safety Policy

It is the policy of ETAD members to take all reasonably practicable steps in order to ensure human and environmental safety in the use of the dyestuffs and organic pigments (synthetic organic colorants), manufactured or distributed by them. Members shall comply worldwide with all applicable laws and regulatory requirements dealing with the safety and the environmental impact of synthetic organic colorants.

ETAD recognizes that the legal requirements for hazard communication differ considerably in various regions where organic colorants are marketed.
A primary objective of this Code of Ethics is to ensure that such differences do not deprive customers in countries with less stringent requirements of hazard information which is made available to their counterparts in countries with more comprehensive regulations. To achieve a common high standard of hazard communication ETAD members shall

- fully inform all customers about all known significant hazards;
- adopt policies to assure an equivalent level of hazard communication worldwide concerning their product.

3. Products Safety Information

3.1. Safety Data Sheets

Member companies shall ensure that for each of the synthetic organic colorants on their selling range, there is a safety data sheet with an appropriate information content and that it is supplied to all customers.

3.2. Labelling

The EU regulations provide an appropriate basis for classification and labelling of organic colorants.

Where the laws of the country the products are sold to, require more stringent or mandate different labelling, the members shall adhere to such required or mandated labelling. In countries with less stringent requirements the labelling shall be in accordance with the EU system or an equivalent consistent with the policy of achieving a uniformly high standard of hazard communication.

3.3. Education and Awareness

ETAD members shall endeavour to inform customers of the safe handling procedures best suited to the products involved.

4. Cessation of manufacture and sale of certain hazardous colorants

The manufacture and sale of certain dyes identified as hazardous by regulation or classification by expert bodies is incompatible with ETAD membership. These dyes are referred to in Annexes A and B.

5. Compliance

Member companies shall comply with the Code of Ethics and shall make every effort to ensure that their subsidiaries do so.

Annex A

Azo dyes or preparations of azo dyes used in consumer applications, which contain, or release by reductive cleavage of azo bonds to any of the specified amines*.

Annex B

Individual Dyestuffs*

** The corresponding amines and dyes are listed with the applicable limit values in "Guidance to ETAD Member Companies on the Implementation of the Code of Ethics" which is regularly updated to the current state of scientific knowledge.*

Benefits of ETAD membership

Recognition
Recognised by regulatory authorities, customers, and the public as the authoritative source of information on health, safety, and environmental issues relating to organic colorants.

Representation
Represents interests of members and customers to government authorities, the media, other industries, public interest groups, organised labour, academia, and research/testing/consulting organisations.

Harmonisation
Advocates, where regulations are necessary, a harmonisation of the requirements, so that compliance costs are reduced.

Code of Ethics
Encourages members to adhere worldwide to a high ethical standard and promotes image of a responsible and safety-minded manufacturing industry.

Guidance
Provides guidance to ETAD member companies on interpretation of new regulatory requirements and recommends specific measures to implement the ETAD Code of Ethics.

Education and training
Develops and publishes education and training materials pertaining to organic colorants, e.g. for safe handling practices, product stewardship, and pollution prevention.

Research and testing
Cost-sharing of research and testing programs aimed at a better understanding of the health and environmental aspects of dyes and organic pigments.

Information
Responds to inquiries about the colorants' industry, provides information on topical issues and disseminates comments and position papers.

Database
Maintains and makes available to members a computerised database of literature pertaining to the health and environmental aspects of dyes.

ETAD member companies

Archroma Management GmbH
Switzerland

ATUL Limited
India

BASF SE
Germany

BEZEMA AG
Switzerland

Brenntag Colours Ltd.
UK

Cappelle Pigments n.v.
Belgium

Clariant International AG
Switzerland

Colourtex Industries Ltd.
India

Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Japan

DIC Corporation
Japan

DyStar Colours Distribution GmbH
Germany

Everlight Chem. Industrial Corp
Taiwan, R.O.C.

Farbchemie Braun KG
Germany

FUJIFILM Imaging Colorants Ltd
UK

Heubach GmbH
Germany

Huntsman, Advanced Materials (Switzerland) GmbH
Switzerland

Jay Chemical Industries Ltd.
India

M. Dohmen GmbH
Germany

Nippon Kayaku Co., Ltd.
Japan

Oh Young Ind. Co. Ltd.
Korea

Oriental Giant Dyes & Chemical Ind. Corporation
Taiwan, R.O.C.

Sensient Colors Inc.
USA

Setaş Kimya Sanayi A.Ş.
Turkey

Sudarshan Chemicals Ind. Ltd
India

Sun Chemical A/S
Denmark

Synthesia, a.s.
Czech Republic

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Tennants Textile Colours Ltd
Northern Ireland

TFL Ledertechnik GmbH & Co. KG
Germany

Thai Ambica Chemicals Co., Ltd
Thailand

Toyo Ink Mfg. Co., Ltd.
Japan

Current list of members under: www.etad.com

Basel

Mailing Address:

ETAD
Stadthausgasse 18
CH-4051 Basel, Switzerland

Telephone: +41 61 690 99 66
Telecopy: +41 61 691 42 78

e-mail: info@etad.com
Internet: http://www.etad.com

Washington

Mailing Address:

ETAD North America
1850 M Street, NW
Suite 700
Washington, D.C. 20036 U.S.A.

Telephone: +1 202 721 4100
Telecopy: +1 202 296 8120

e-mail: helmest@socma.com

Baroda

Mailing Address:

Indian Operating Committee of ETAD
c/o Heubach Colour Pvt. Ltd.
Landmark Building – 2nd Floor
Race Course Circle, Baroda – 390007
Gujarat, India

Telephone: +91 265 235 48 24 / 231 48 60
Telecopy: +91 265 235 48 27 / 234 16 82

e-mail: annamma@heubach-india.com

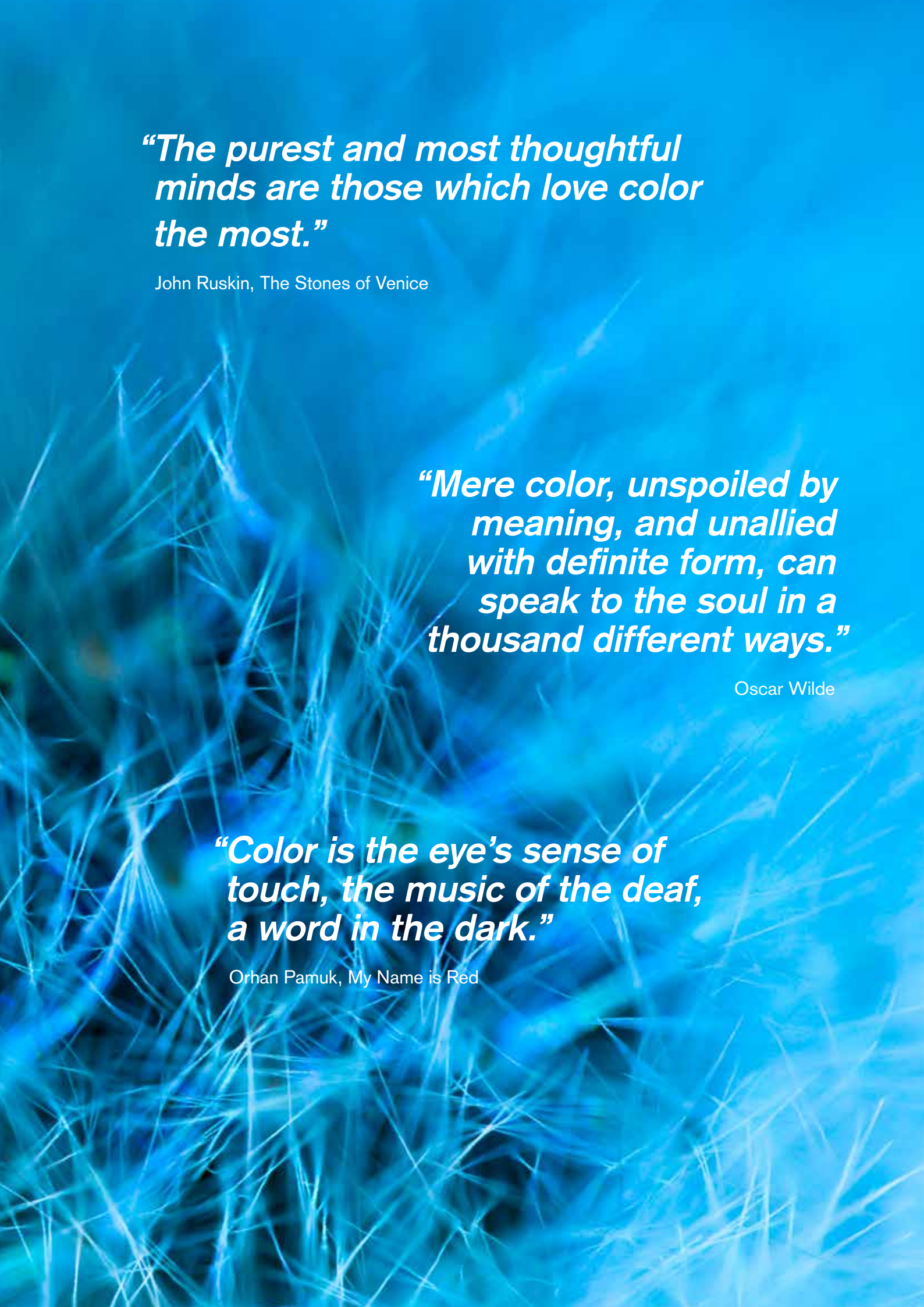
Tokyo

Mailing Address:

Japanese Operating Committee of ETAD
c/o Kaseihin Kaikan
18-17, Roppongi 5-chome
Minato-ku
Tokyo 106-0032, Japan

Telephone: +81 3 3585 3374
Telecopy: +81 3 3589 4236

e-mail: nagaoka@kaseikyo.jp



"The purest and most thoughtful minds are those which love color the most."

John Ruskin, The Stones of Venice

"Mere color, unspoiled by meaning, and unallied with definite form, can speak to the soul in a thousand different ways."

Oscar Wilde

"Color is the eye's sense of touch, the music of the deaf, a word in the dark."

Orhan Pamuk, My Name is Red

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The Ecological
and Toxicological
Association
of Dyes
and Organic
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