

Institut für Glas- und Rohstofftechnologie

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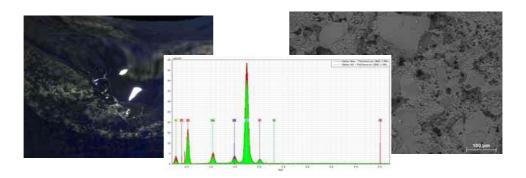
News:

- Trainings for the glass industry e.g. fracture analyses
- Analyses of materials, metal and corrosion
- Performance and evaluation of tracer tests
- Successful monitoring audit and expansion of the accredited sector
- RAL registration of the IGR as to the recirculation of material
- Analyses of synthetic mineral fibres concerning the material compatibility
- extension offer analyses about permissible limits of heavy metal values for Al, As and Co
- Leaching Test according REACH
- Network meeting from GlasClusters Weserbergland and IGR
- IGR were represented at the glasstec 2016 in Düsseldorf

Training for the glass industry e.g. fracture analyses

As a new service the IGR offers now training sessions on the topics of fracture analyses, cold- and hot end coating and also thermoshock analyses. By request also on your own premises.

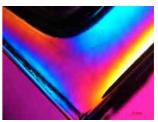
examples:











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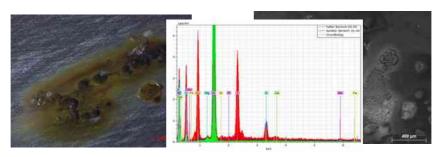
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Analyses of materials, metal and corrosion

For some time the IGR carried out among others also particle analyses which were found in food packaging. Therfore were done identifications of glass splinters, pieces of metal or plastics. The new market opens up. With the analyses of metal material, starting from moulding tools of the glass industry for determination of alloys, circuit boards for electrical apparatus until corrosions analyses of cans and closures. On top the reaction of the filling material with the packaging was entered into the assessment.

example:

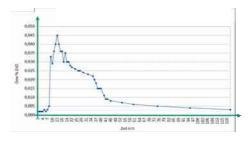


Performance and evaluation of tracer tests

Tracer test proved to be successful in glass industry analysing technical problems as the origin of bubbles and relics as well as the flow conditions of melting tanks. Therefore a concentrated non-glass element, which don't interfere the molten glass, is to be added once-only to the batch. The chemical modifications are analysed in the finished product. A tracer test which is supervised by the IGR includes the planning, the analyses, the evaluation and interpretation.

As an example a tracer test of a 200 t container glass melting tank.

On base of experiences we recommend the application of two tracer elements.



Successful monitoring audit and expansion of the accredited sector

New: DIN ISO 4802 Glassware - Hydrolytic resistance of the interior surfaces of glass containers -

- Part 1: Determination by titration method and classification
- Part 2: Determination by flame spectrometry and classification



IGR is RAL-approved for backtrace analyses

EUCEB - European Certification Board for Mineral Wool Products

RAL - Gütegemeinschaft Mineralwolle e.V. (GGM)



Process: The IGR carries out a standardised wet-chemical analysis of a mineral sample taken by the customer with the appropriate documentation. Subsequently RAL rated the results in terms of compliance with the exemption criteria of hazardous substances (Annex II, Nr. 5).

There are world wide just four institutes approved to carry out this backtrace analyses!

cement

Analyses of synthetic mineral fibres concerning the material compatibility

To avoid steel corrosion, the use of composites is really important nowadays. Principally glass corrodes under basic conditions. Therfore the IGR developed - e.g. for fibreboard producers - a compatibility analysis, particular for the combination of synthetic mineral fibres with cement.

Therfore the analysis of the elution of water-soluble Cl-ions respectively F-, Si- und Na-ions and the determination of the pH-value according DIN EN 13468 of the fibre material is performed.

Expansioned offer - analyses about permissible limits of heavy metal values for Al, As and Co

The framework of the official **control** of **foodstuff** includes the obligation of a regular verification of non-exceedance of the defined limit of sundry heavy metals.

The IGR offers analyses of the heavy metal solubility of lead and cadmium according DIN EN 1388-2 respectively ISO 7086. Following the French regulation EC 1938/2004 this testing method is expanded by the elements AI. As und Co.

Leaching Test according REACH

REACH is the European regulation for the registration, assessment, permission and restriction of chemicals. It came into force 2007 and shall insure a high level shelter for human health and the environment.

Currently the IGR offers a test method for the determination of the REACH-relevant chemical elements according Reach-Dossier "Exemption from registration for glass under REACH regulation n.1907/2006/EC". Currently the elements As, Cd, Cr, Sb, Pb and Se are analysed.

Network meeting -



representation and GlasCluster Weserbergland

The GlasCluster Weserbergland *plus* is a network initiative of the glass sector. Here craft business and industrial companies from the sector flat, hollow and special glass are interconnected.

In september a high-level exchange of informations took place at the IGR.





at glasstec

International exhibition for glass production - processing - products

The IGR was represented at this year's glasstec, the world's largest exhibition of the glass sector and wants to thank all visitors for the lively interest.

