

BRINGING LIFE  TO PLASTICS

# PURE & certified

PURE  
TRANSPARENCY

PURE  
TASTE



PURE  
CERTIFIED

NIAS  
ANALYSED



THE SIGN  
OF GOOD TASTE



# IT'S ALL A MATTER OF TASTE

As a traditional Austrian company we are a specialist when it comes to refining and dyeing plastics. Our company has been in existence since 1950 and we are today one of Europe's leading masterbatch manufacturers. As an independent and privately-owned group we operate our headquarters in Austria, with further sites in Germany, the UK, Hungary, the Czech Republic, Poland, Italy, Spain and Russia. Main clients for masterbatch are plastics processing companies from many areas, including producers of food and beverage packaging.

The packaging of food and beverages is one of the most challenging tasks in the packaging world. The final product should not only be visually appealing, functional and provide optimal durability, but also the flavour and freshness of the packaged contents needs to be preserved.

A flavour impairment caused by the packaging would

be detected immediately - especially in sensitive products such as e.g. mineral water. This could lead to consumer complaints and result in product recalls or in the worst case, damage the public reputation of the brand. It is often hard to trace in which part of the value chain – beginning with the raw materials and ending at the consumer – the problem was caused.

HOW PURE WORKS



PREPARATION  
OF RAW MATERIALS



PIGMENT



SAMPLES  
GO THROUGH  
GAS CHROMATOGRAPHY

As a result of intensive communication with plastics converters and leading brands within the food and beverage industry, we have developed PURE, a unique additional service package, that provides complete transparency within the value chain for masterbatch customers and the confidence that our masterbatch is the industry benchmark for organoleptic and food safety issues.

## PURE

PURE is based on two test methods – recognised as standard within the industry – for the testing of incoming and outgoing products. The customer receives a complete set of documentation based on the three modules of PURE.

### THREE COMPONENTS ARE INCLUDED IN PURE:

1. NIAS analysis of raw materials
2. Organoleptically assessed masterbatch
3. SML concentration estimate



## ANALYSIS OF NIAS IN THE GAS CHROMATOGRAM

### ① NIAS ANALYSIS USING GAS CHROMATOGRAPHY

The EU Regulation 10/2011 covers materials and objects made of plastic intended to come into contact with food. Materials that are used in the production of objects made of plastic can contain impurities.

These materials are inadvertently brought into raw material production (NIAS – Non-Intentionally Added Substance). Approved substances are kept on the Union list of the EU. With the latest gas chromatography, we are able to test all materials for the presence of volatile, organoleptically relevant NIAS. Concentrations of non-approved substances that are noteworthy in the chromatogram are analysed in close cooperation with the Fraunhofer-Institut IVV Freising by means of mass spectrometry.

Should the suspicious substance be relevant to the risk assessment, the raw material that led to the introduction of the substance is determined and alternative raw materials are tested.

Once all concentrations are below the substance-specific, organoleptically relevant concentration, a certificate including a detailed analysis is issued.

SAMPLES IN THE HEAT CHAMBER



FILLING OF THE SAMPLE CONTAINER

## ② SENSORY PANEL CONDUCTING ORGANOLEPTIC ANALYSES

The sensitive human sensory organs serve as reliable measuring instrument for the organoleptic evaluation, which is the second module of PURE. After successfully passing the NIAS-Evaluation, various raw materials are used to manufacture masterbatch in the test laboratory, from which injection moulded parts are produced.

A specially trained sensory panel examines and assesses the injection moulded parts in a complex organoleptic evaluation process lasting several hours. The samples are stored in selected reference liquids, such as still water from a standardized brand and blind testing is carried out to check for flavour deviations. As a result the processors receive a detailed test report and profile in which the organoleptic suitability of the products is documented. Because of the professional initial training and certification of the testers, the regular development workshops and the minimum size of the panel, the testing is recognised as being a relevant and significant industry test method.



VISUAL  
IMPACT

2

2



TASTE &  
SMELL

3



### 3 SML SPECIFIC MiGRATION LiMiTS

EU Regulation 10/2011 requires producers of plastics that come into contact with foodstuffs to control the quantity of ingredients that can migrate into food. Specific migration limits (SML) must be complied with for many of these substances.

We endeavour to keep the number of substances with SML in our products as low as possible, however their presence cannot always be avoided. In order to create a rough overview of the quantities to be expected, we establish an estimate of concentrations of SML-regulated additives in our products in cooperation with our suppliers. The concentration information we supply goes above and beyond the legal obligation and facilitates an easier analysis for our customers, which can save both time and money. The analysis includes the applicable specific limit values and the maximum permissible quantity, which may migrate into food according to the standard method of risk assessment, for each substance.



*Please note that we can only refer to the information provided by our suppliers and this estimate therefore does not represent a quantitative, analytical statement of the actual concentration of substances.*

**UNITS OF THE GABRIEL-CHEMIE GROUP:**



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