

EmslandInnovation NEWS

Preface

Newsletter provides information on the latest from the Innovation Centers

Welcome to the premiere edition of EmslandInnovation News with which we want to provide you with periodic updates on the latest status of our projects, information about new products, our pilot systems and laboratory equipment, and any possible personnel change. Good and fast information is a key factor to commercial success in today's modern business world. The quarterly newsletter make a contribution to this with current and transparent We are more than happy to answer your questions about the topics presented which helps us consider the perspectives of other departments or local markets in our work.

Thomas Pruter, TPruter@emsland-group.de

People

Aldwin Tedjo will be responsible for product and food legislation

Mr. Aldwin Tedjo was employed by the Emsland Group as "Manager Regulatory Affairs" on December 1, 2015. In this function he will deal with food and product legislative affairs. The Indonesian native received his diploma in food chemistry in Karlsruhe in the German state of Baden. Then he moved to Bavaria to complete the second state examination for the Bavarian food administration authority (LGL) and earn the professional title of "Certified Food Chemist". Aldwin Tedjo speaks German, English, and Indonesian.

Aldwin Tedjo, ATedjo@emsland-group.de

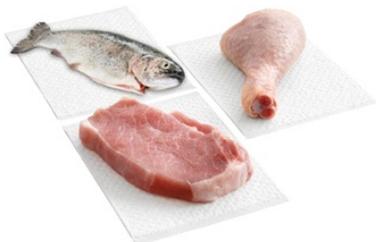


Projects

Emsorb® 2000 super-absorber in environmentally-friendly hygiene articles

This project includes product development of the Emsorb® 2000 to improve absorbent properties, the capacity to absorb fluids, and product adjustment to the processing technology used.

The area of application includes diapers and absorbent pads for meat packaging (fluid inclusion to protect food).



Emsorb® 2000, based on the renewable resource of potato starch, replaces the previous synthetic absorbent cores for diapers and food packaging. This saves resources and the environment.

For the project with diapers, the goal is 100% biologically absorbable diapers that are completely compostable and petroleum-free and made of only renewable resources.

Hermann-Josef Melcher, HJMelcher@emsland-group.de

Equipment

ICP emissions spectrometer enriches filter technology

The area of application for filter technology makes it necessary to specify the smallest quantities of elements in products for our customers and to not exceed the given limit values. This involves elements like sodium, potassium, magnesium, calcium, and phosphorous. The ICPE gives us the opportunity to specify approximately 70 different elements.



With the extreme high temperatures in the interior of the device (plasma), the sample is destroyed and disintegrates into its individual components. The atoms and ions are now excited into light emission (different wavelengths) that are used optically for identification (in other words, what element is involved here?) and that are used to measure the concentration (quantity share) used.

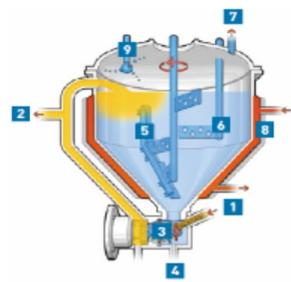
This method of analysis makes it possible for us to control and improve processes in a timely manner for our sophisticated products.

Jan Meyer, JMeyer@emsland-group.de

Equipment

Koruma vacuum process systems ideal for delicatessen products

The Fryma Koruma MaxxD involves a vacuum process system for the food industry. A broad range of applications is covered with the new device. The Maxx D can be used for manufacturing mayonnaise, dressings, sandwich spread (depending on viscosity), ketchup, and sauces that require a cold or cooking process.



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|---|-------------------|---|-----------------|
| 1 | Product inlet | 6 | Flow breaker |
| 2 | Product discharge | 7 | Vacuum system |
| 3 | Homogenizer | 8 | Heating/cooling |
| 4 | Waste drainage | 9 | CIP |
| 5 | Scraper-agitator | | |

The Maxx D offers a usable volume of min/max 3-12 liters. The container, as well as one of the two tanks, can be heated (up to 100°C) as well as cooled (steam or cold water) and both are equipped with a double shell.

As a result, it offers a variety of possible uses, including developing custom-tailored recipes for customers that make it easy to scale up production. In addition, our products can be reviewed for process stability with comparison applications (of interest for clean label products).

Heidrun Lambers, HLambers@emsland-group.de

Training

Internal training in Emsland Innovation Germany

Comprehensive internal training is offered from the food division in the new Innovation Center for the Emsland Group. A total of nine training dates are set in 2016 for the flake department, oxidation, production laboratory, and rolling mill department.



The goal is to provide students with in-depth basic knowledge of starch products and potato flakes and granulate. Participants are trained on technical product and food issues with presentations and practical workshops, and receive an overview of interesting new developments in the food industry.

Recently more than 100 attendees were able to strengthen their basic knowledge and return to production and the labs to further optimize our quality products.

Martina Herrmann, MaHerrmann@emsland-group.de

EAFI

Emsland Asia Food Innovation expanded cooperation with Thammasart University

EAFI has been co-ordinating several projects with BIOTEC team of Cassava and Starch Technology Research Unit, such as glass noodle projects and technical services for starch analysis. Recently, EAFI has expanded a new co-ordinator with Department of Food Science and Technology at Thammasart University to support more projects on food applications. The projects, co-ordinating between Department of Food Science and Technology and EAFI are doughnuts, muffins, Mu-Yor sausage (Vietnamese sausage), patties, ham, and glass jelly.

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