2002
2022

FLUXANA®

XRF Application Solutions

Dr. Rainer Schramm, Founder and Managing Director of FLUXANA GmbH & Co. KG

20 years of service to the RFA

The fascinating thing about X-ray fluorescence analysis (XRF) is that it can be universally applied in the field of analytical chemistry. The fact that almost all elements in the periodic table can be analysed in any material has led to there being almost no industry in which XRF does not play an important role today. As it continued to spread, however, the need for advice and support also grew. Many new analytical questions could only be opened up with XRF after the corresponding development work had been carried out in the application. The founding of FLUXANA® created a platform that could do just that. In 20 years, we have been able to establish a worldwide network for this purpose, which is now recognised as a permanent institution by clients and partners, and is automatically included when new issues arise.

In this anniversary book I would like to describe the development of FLUXANA® from the founding idea until today.

For me and my staff, it is an eventful history full of memorable experiences, exciting challenges and great moments.

Join me on a journey through 20 years of company history.

Starting shot

In the many years that Dr. Rainer Schramm worked in the field of X-ray fluorescence analysis up until 2002, he noticed one thing again and again: a gap in support for customers in the XRF field for applications.

With the aim of closing this gap, the sole proprietorship FLUXANA® was founded in Bedburg-Hau, Germany on 1 May 2002. Initially, only consumables such as cups, films and lithium borates were sold in addition to expertise in XRF.

In 2006, it was necessary to find a space for offices, laboratory and production in Kleve.

Location in Kleve

Warehouse, laboratory and production-site in one. The need for space grew quickly and the first employees were hired. On 1 July 2006, a warehouse with offices was rented in the town of Kleve, Germany to ensure the increasing trade in XRF products could be handled successfully. With the help of the Nuremberg University of Applied Sciences, the development of the first application set for the cement industry was started. This is when FLUXANA® became FLUXANA® GmbH & Co. KG.

2002
Year of foundation

2006
Kleve location

Ilmenau branch

Thuringia

Dr Rainer Schramm had been looking for a way to produce drift monitors for some time, when the answer emerged at the Pittcon trade fair in the USA. The trail led to Thuringia in the east of Germany, which traditionally has close ties with the glass industry. It took another year before contact was made with Dr Bernd Hamann, who, equipped with an oven, was able to carry out the first trials into the production of drift monitors at Ilmenau Technical University. A short time later, Dr Bernd Hamann moved into the Ilmenau Technology Centre as a FLUXANA® employee. Here, the development and production of the glasses underwent significant further expansion. Today, the branch produces large quantities of the drift monitors that are so important for the XRF sector at another location in Ilmenau, making FLUXANA® the market leader in this segment.

Dr. Rainer Schramm and Dr. Bernd Hamann hang the company sigh at the Ilmenau Technology and Start-up Centre.

2008
Opening of the glass production branch in Ilmenau, Germany

Production of drift monitors: a lot of craftsmanship and know-how is needed for the production of durable samples.

PROFILE
Ilmenau

Opening: 2008

Number of employees: 5

Drift monitors manufactured: 25,230

Fun fact: As the market leader in drift monitors, FLUXANA produces the important glass samples for the majority of XRF spectrometers worldwide.

Future: Thanks to ongoing growth and constant new product developments, the Ilmenau site will continue to grow.

Bedburg-Hau branch

North Rhine-Westphalia

In 2009, the groundbreaking ceremony for the current main building in Bedburg-Hau takes place. The new offices, the large warehouse and a modern laboratory form the cornerstone for the further growth of FLUXANA®.

Even then, everything was in the spirit of sustainability. Electricity generation from photovoltaic systems and a clever geothermal system for cooling the X-ray fluorescence spectrometers and simultaneously heating the rooms make the building a model in terms of climate protection. FLUXANA® was awarded the RWE Innovation Prize for Heat Pumps 2010 for this achievement.

Presentation of the Entrepreneur Award from the Bedburg-Hau FDP local association: "Golden Spade 2009".

2009
Construction of the new main site in Bedburg-Hau

PROFILE
Bedburg-Hau

Opening: 2009

Number of employees: 40

Preparations carried out: 103,005

Fun fact: FLUXANA® owns X-ray fluorescence spectrometers from all leading manufacturers, which means it can serve a large clientele in a neutral and independent manner.

Future: As the main location, Bedburg-Hau is and remains the hub for new developments and innovations.

2009: Laboratory area in the new building.

Lower Rhine Entrepreneur Award

In 2010, FLUXANA® received a special honour. The Lower Rhine Economic Forum honoured the great entrepreneurial achievement of Dr. Rainer Schramm as Managing Director of FLUXANA® with the 2010 Entrepreneur Award. In a time of major economic crisis, he showed foresight as an entrepreneur and expanded his competences in the field of chemistry.

At that time, FLUXANA® already had 17 employees and was active on a global level. The clientele was already very international at that time, with one third coming from Germany, one third from Europe and one third from the rest of the world.

Dr. Rainer Schramm accepts the Entrepreneur Award.

Start of production in Kleve

The increased demand for sample-preparation equipment meant that FLUXANA® very soon had to look for a new building in which to produce equipment. A large hall at Tichelpark in Kleve, formerly used by Roterberg-Maschinenbau GmbH, quickly turned out to be a suitable candidate. Besides offices, the hall had enough space to manufacture presses and melting equipment.

View into the production hall at Tichelpark in Kleve.

2010
Lower Rhine
Entrepreneur Award

2012
Start of production
in Kleve

Accreditation of the testing laboratory

DIN EN ISO/IEC 17025

In order to meet increasing expectations in terms of analysis quality, the FLUXANA® testing laboratory was faced with a new challenge: accreditation according to DIN EN ISO/IEC 17025.

In 2014, the testing laboratory finally received the important accreditation and has since been able to offer internationally recognised and comparable analyses. This allows FLUXANA® to position itself in international markets and meet growing customer expectations.

DAkkS Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Beliehene gemäß § 8 Absatz 1 AkkStelleG i.V.m. § 1 Absatz 1 AkkStelleGBV
Unterzeichnerin der Multilateralen Abkommen
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung

Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Prüflaboratorium

Fluxana GmbH & Co. KG
Borschelstraße 3, 47551 Bedburg-Hau

die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

Bestimmung von natürlich vorkommenden Elementen mittels Röntgenfluoreszenzanalyse (RFA) in technischen Produkten und deren Ausgangsstoffen (wie Rohmaterialien, Industrieerzeugnissen und Abfällen); ausgewählte gravimetrische Verfahren zur Analyse von mineralischen Feststoffen

2014
DIN EN ISO/IEC 17025
Accreditation


FLUXANA
VITRIOX
ELECTRIC

With a lot of development know-how

The VITRIOX® ELECTRIC fusion unit

The project for the analysis of volatile elements was developed in cooperation with the Rhine-Waal University of Applied Sciences and funded by the "Central Innovation Programme for SMEs".

The result of this project is the VITRIOX® melter, which has been improved many times over to date. The sample preparation device uses the knowledge gained from research to achieve unprecedented precision in XRF and especially in the analysis of volatile elements.

Gefördert durch:
Bundesministerium für Wirtschaft und Energie
aufgrund eines Beschlusses des Deutschen Bundestages

ZIM Zentrales Innovationsprogramm Mittelstand

In cooperation with:
HOCHSCHULE RHEIN-WAAL
Rhine-Waal University of Applied Sciences

One of the first models of the VITRIOX® ELECTRIC.

2014
Brand launch
VITRIOX® ELECTRIC

Dr. Rainer Schramm and Prof. Dr. Klotz signing the cooperation agreement with Rhine-Waal University of Applied Sciences.

A laboratory employee observes the pouring of the melt.

Site expansion

Extension of the main building

With 33 employees at that time, the main building in Bedburg-Hau was already too small for the space required by the company, which had increased enormously. The building space finally doubled in 2015. In addition to a large, new laboratory area, this also created further office space and a large warehouse.

Construction of the new warehouse.

The large laboratory offers plenty of space for various sample preparation devices.

Front view of the main building after completion of the extension.

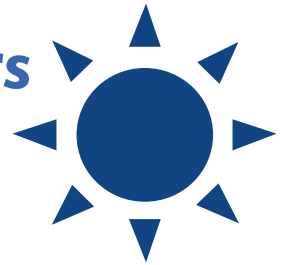
2016
Site expansion

FLUXANA in figures

25,230 drift monitors produced

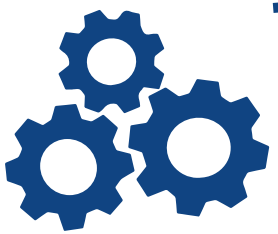
26,741 glasses manufactured

over **500,000** kilowatt hours generated with solar



103,005 preparations

712,928 KM driven by car



764 appliances manufactured

over **50,000** invoices written

Average age of employees: **40.8**

2,312 application sets installed

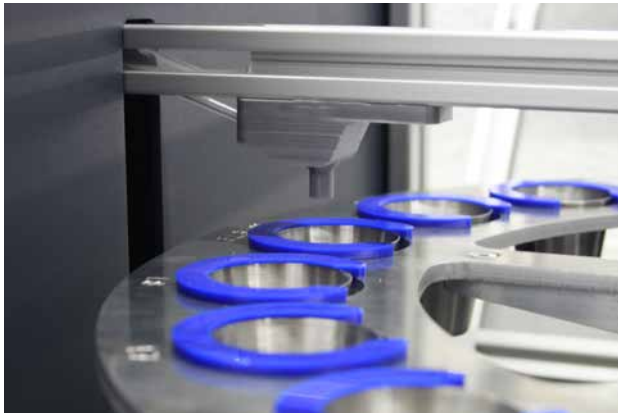

BORAMAT®
MATERIAL DOSER
FLUXANA

New approaches to product development

The BORAMAT® dosing system

FLUXANA® took a further step towards automation in 2018 with the market launch of the BORAMAT®. The dosing unit for melting agents is thus already the second product innovation in the field of sample preparation machines.

As with the VITRIOX® ELECTRIC, the aim here was to achieve the company's own high standards of precision and reliability. The benchmark was set by the company's own laboratory with its high standards for manual weighing.



Thanks to the carousel, the BORAMAT® 18/30 can carry out up to 18/30 doses of melting agent in succession.

The BORAMAT® Mono is the first model and uses an external precision scale for weighing.

2018
Market launch
BORAMAT

Relocation of the Ilmenau site

Farewell to the TGZ

After years of successful production and development of drift monitors, the Ilmenau branch of FLUXANA® had to say goodbye to the Ilmenau Technology and Start-up Centre. It was not possible to renew the lease and a replacement was quickly found.

Remaining loyal to the Ilmenau area, new premises were found at the "am Vogelherd" industrial area, and hastily occupied in July 2019. With significantly more space and a total of 5 employees, the Ilmenau site now produces a wide range of drift monitors for customers and X-ray fluorescence spectrometer manufacturers from all over the world. If you operate an XRF spectrometer, there is a good chance that you also use several FLUXANA® drift monitors.

Above: the classic car in front of the door is not to be missed. Below: Now it's getting hot – an instinctive touch is needed here.

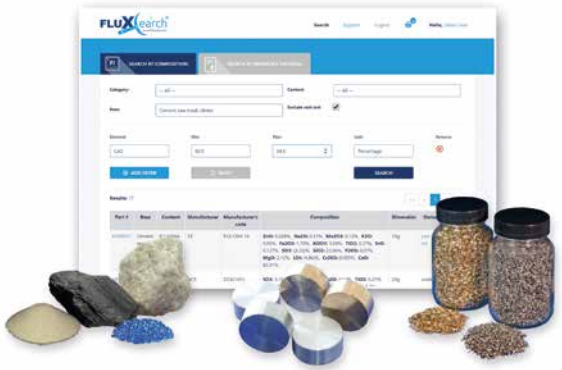
2019
Relocation of the Ilmenau site to a new building

Digital innovations

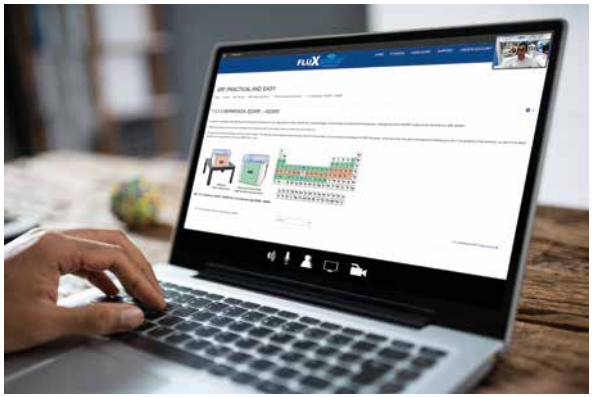
Launch of FLUXearch® and FLUXaminar®

The laboratory as a workplace is undergoing constant and rapid change. Digitalisation and automation are crucial terms that play a dominant role in Lab 4.0. As a company in the chemical industry, FLUXANA also has to face this challenge.

With the launch of the modernised FLUXearch® reference material database and the FLUXaminar® e-learning platform, FLUXANA® digitalised two new service areas in 2020. This made them available to customers and laboratories internationally and at any time.



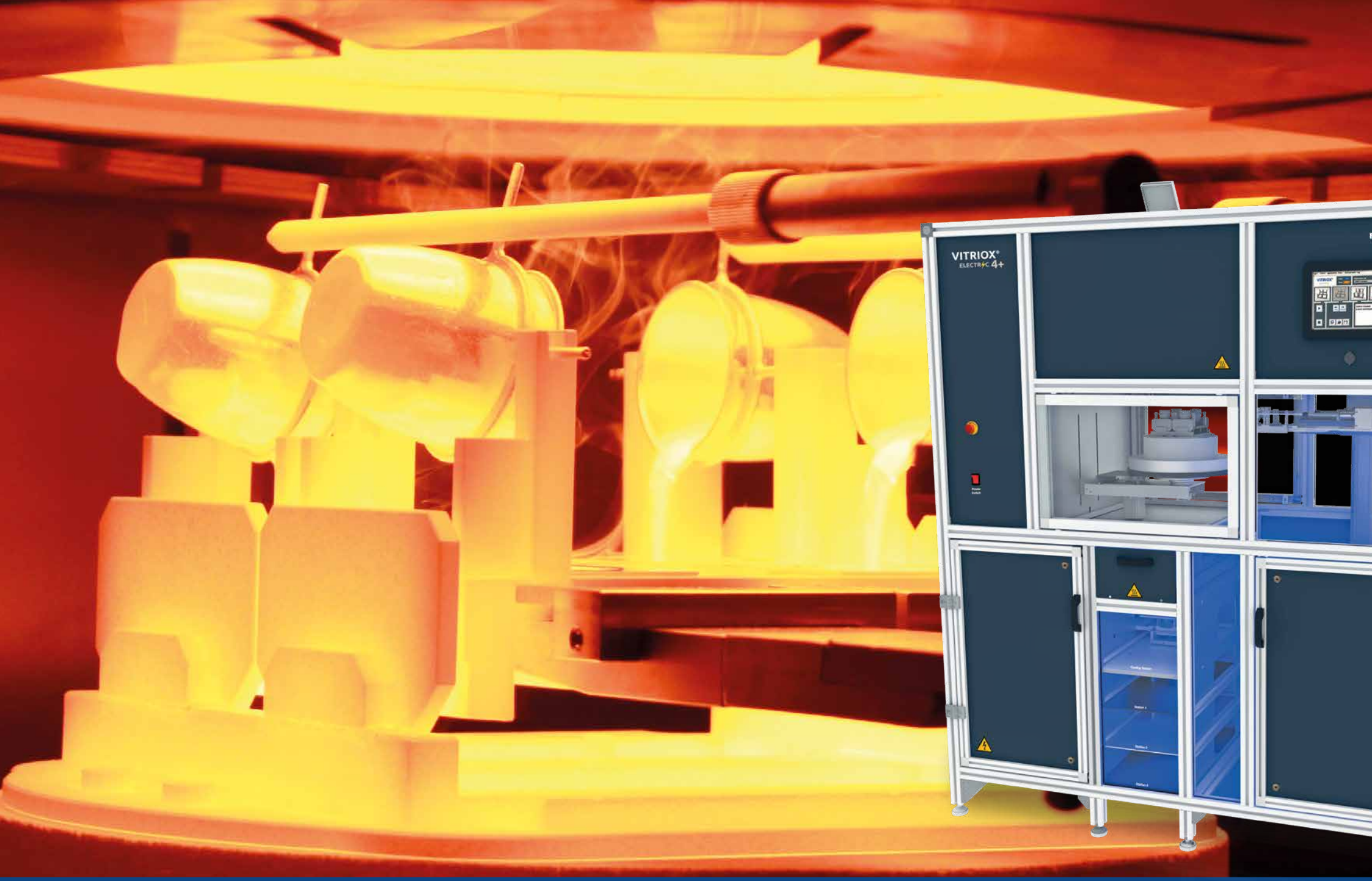
The large FLUXearch® reference material database with over 24,000 materials.



The FLUXaminar® e-learning platform is the first and only digital training platform in the field of XRF.

2020
FLUXearch® relaunch

2020
FLUXaminar® launch


VITRIOX®
ELECTRIC 4+

Another step into the future

The VITRIOX® ELECTRIC 4+ fusion machine

After the successful launch of the VITRIOX® ELECTRIC, further development followed in 2020 in the form of the VITRIOX® ELECTRIC 4+. The fusion machine, which has a significantly higher throughput and sophisticated software control, represents a huge leap forward, especially in automation.

The VITRIOX® ELECTRIC 4+ is designed so that the user can operate the unit with minimal effort and without much know-how. The fusion machine automatically processes up to 16 samples and can be reloaded during operation. This means that work processes can be better planned and waiting times avoided.

Further features, such as connection to dosing systems and integration into LIMS software, are also already possible or in the planning stage.

2020
Market launch
VITRIOX® ELECTRIC 4+

The large melting furnace can melt up to 4 samples simultaneously.

Four drawers serve as a sample magazine.

New production building in Bedburg-Hau

Production moves into the neighbourhood

For a long time, FLUXANA® machine production was located at another site in the neighbouring town of Kleve. However, the ever-growing product range and the increased demand for sample preparation machines have led to an ever-increasing need for space.

After a long planning period, construction of the production hall in Bedburg-Hau finally got underway in 2020. Just one year later, it was possible to move into the now completed building. In addition to many offices for production planning and research and development, the building has a large warehouse and various production areas for manufacturing the machines.

2020
Construction of the new production facility in Bedburg-Hau

Accreditation for the production of reference material

DIN EN ISO 17034

Reference materials are the must-have for the calibration of X-ray fluorescence spectrometers, because they serve as a gauge and benchmark value in measurement procedures, and are indispensable for tests and checks. FLUXANA produced its own reference materials according to strict specifications at an early stage.

In order to also be able to produce certified reference material, FLUXANA has started to implement the DIN EN ISO 17034 accreditation. Finally, following an elaborate process, FLUXANA® received the coveted certificate in 2020. It now officially certifies FLUXANA® as a competent producer of high-quality and certified reference materials.

The first accredited reference materials from FLUXANA® were two cements.

2020
DIN EN ISO 17034
Accreditation


DAkkS
Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH attests that the reference material producer

Fluxana GmbH & Co. KG
Borschelstraße 3, 47551 Bedburg-Hau

is competent under the terms of DIN EN ISO 17034:2017 to produce reference materials in the following fields:

Reference materials and certified reference materials in the field of raw materials for the construction materials and glass industry, refractory materials and

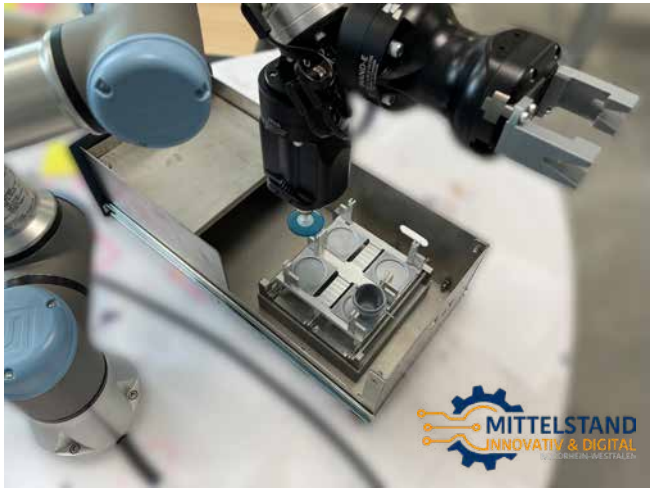
Future

Robots, 3D printing and digital worlds

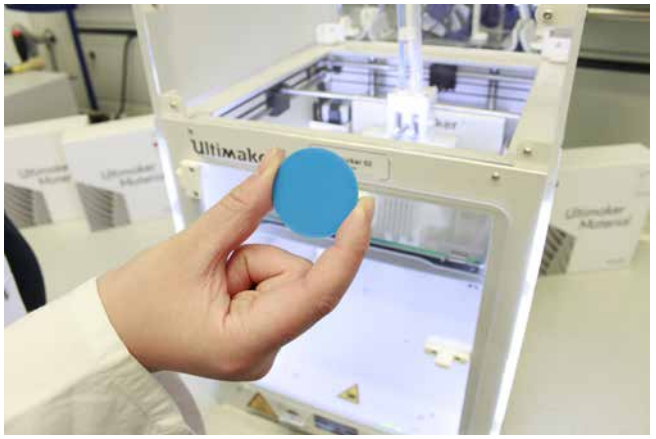
With new technologies come new ideas. And the many exciting inventions that mankind has come up with in recent years also show that there is still much to discover and explore in the field of X-ray fluorescence analysis.

Robots, so-called Cobots®, could be put to cost-effective use in automatic sample handling. Reference materials of various kinds could also be printed by 3D printers in the future. And we are still a long way from discovering the limits of what is possible, especially in the field of digitalisation.

One thing is certain – there is no lack of great ideas at FLUXANA®, which means we are looking forward to the next 20 years with excitement and curiosity.



Cobots® can facilitate sample handling in the future.



Standards from the 3D printer will be increasingly used in the future.

202?
Future

Advantage of the university site

Company and university collaborate

As with the development of the VITRIOX® ELECTRIC, FLUXANA® intends to continue its cooperation with the Rhine-Waal University of Applied Sciences in the future. Further exciting projects and research areas are to be developed together with students at the university. Conversely, FLUXANA supports students with interesting topics for bachelor theses and offers a wide range of internships.

FLUXANA® already employs a total of 3 former students from various courses of study, some of whom have already written their bachelor theses at the company. FLUXANA® sees the university as an important locational advantage for the region and benefits from the skilled workers who are trained there. This is where the support of the universities as companies pays off in full.

HOCHSCHULE RHEIN-WAAL
Rhine-Waal University of Applied Sciences

202?
Future

FLUXANA GmbH & Co. KG
Borschelstraße 3, 47551 Bedburg-Hau, Germany
Tel.: +49 (0) 2821 480 11 10
Fax: +49 (0) 2821 480 11 99
E-mail: info@fluxana.com
Web: www.fluxana.com

FLUXANA®
XRF Application Solutions