



THE UPDATE

ISSUE 12 • AUGUST 2022



Summer is here,
let's give a big cheer!

Dear customers, partners & interested clients,

We hope this newsletter finds you healthy and well. We have been very busy and have some interesting updates for you. We hope you enjoy reading this issue of *The Update*.

All our best,

The Dosimetrics Team

DOSIMETRICS
NEWSLETTER

TABLE OF CONTENTS

70th Anniversary AWST • P. 2

Featured Customer: TINT • P. 3-4

Finger Ring - Approval • P. 5

Introduction: Nadine • P. 5

Back on the Road • P. 6

Happy Birthday, AWST!

The “AWST - Auswertungsstelle für Strahlendosimeter“ celebrates its 70th Birthday this year!

We are very proud that through Dosimetrics' merger with Mirion Technologies (AWST) GmbH we now belong to a company with such a long tradition and experience.

AWST was founded in 1952 by Prof. Dr. Felix Wachsmann and is the oldest monitoring service in Germany and the largest in Europe.



History of AWST

- 1952 - “AWST - Auswertungsstelle für Strahlendosimeter“ founded by Prof. Dr. Felix Wachsmann
- 1969 - Integration in “gsf - Gesellschaft für Strahlenforschung“
- 1989 - Integration of film-monitoring service Karlsruhe in gsf-AWST
- 1996 - Dr. Wolfgang Wahl takes over management
- 2001 - Certified and accredited according to ISO 17025 as the first german monitoring service
- 2004 - Takeover of monitoring service Hamburg
- 2006 - Integration of glass-monitoring service Karlsruhe in gsf-AWST
- 2008 - Renaming from “gsf-Auswertungsstelle“ in “Auswertungsstelle im Helmholtz Zentrum München“
- 2011 - Prof. (NRNUM) Dr. Christoph Hoeschen takes over the provisional management
- 2013 - Markus Figel takes over management
- 2020 - Mirion Technologies takes over AWST and continues under new name Mirion Technologies (AWST) GmbH; Markus Figel is appointed general manager
- 2021 - Merging Mirion Technologies (AWST) and Dosimetrics



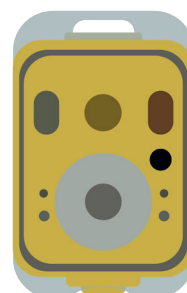
AWST Whole Body Dosimetry - Development



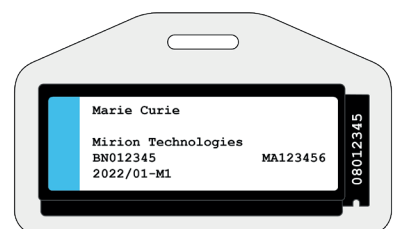
Film Dosimeter - GD 1
1952 - 2011



Film Dosimeter - GD 20/40
1986 - 2011



Film Dosimeter - GD 60
2010 - 2011



BeOSL Dosimeter
since 2011

สถาบันเทคโนโลยีนิวเคลียร์แห่งชาติ (องค์การมหาชน)

Thailand Institute of Nuclear Technology
(Public Organization)



Featured Customer: TINT: Thailand Institute of Nuclear Technology

In this issue of The Update, we are featuring our customer TINT from Thailand.

1. What is the history of TINT?

“Thailand Institute of Nuclear Technology (TINT) is an independent organization established by Royal Decree in April 2006. The Institute is under the supervision of the Ministry of Higher Education, Science, Research and Innovation and managed by the Executive Director of TINT.

Our mission is to:

- Carry out research and development on nuclear science and technology for sustainable development of the country
- Transfer technology and provide consultancy services regarding the utilization of nuclear technology for socio-economic and environmental development
- Administer and operate the research reactor and other nuclear facilities, and provide nuclear technology and safety services to the public
- Promote a nuclear network and cooperate with organizations and research institutes, both domestic and international
- Disseminate and build up public acceptance on the utilization of nuclear science and technology for national development

TINT facilities include:

- TRR-1/M1 research reactor with maximum steady state power of 2 MW (thermal) and up to 2,200 MW in pulse mode for a short time of 10.5 milliseconds
- Gamma Irradiation Center for treatment of food and agricultural produce such as spices, herbs, fruits and seafood. EU, ISO and USDA Certified
- Gem Irradiation Center providing gamma, electron and neutron irradiation service that create colorful gemstones such as topaz and tourmaline
- Nuclear Technology Service Center providing analysis, test, calibration, certification, inspection etc. on a wide range of materials and equipment
- Radioactive Waste Management Center composed of solid and liquid waste treatment and storage facilities, management and operational services”

2. Could you give us an overview of what your organisation does?

“Nuclear Technology Service Center is a center of Thailand Institute of Nuclear Technology (Public Organization) which performed radiation dose measurement, analysis, test, calibration, certification, inspection and etc. on a wide range of materials and equipment. For radiation dose measurement and assessment to radiation workers and workplace monitoring had assigned to individual monitoring service laboratory (IMS lab).

IMS lab is the national service provider for occupational monitoring. This includes work associated with medical, industrial and research for approximately 23,000 radiation workers. We provide personal dosimeters and workplace monitors for whole body, extremity, the lens of eye dose and environment. We operate an ISO/IEC17025 quality system and are accredited by Bureau of Laboratory Quality Standards of Thailand.”



TINT building - Nakhon Nayok Province

3. What is TINT's plan for the use of their BeOSL system?

"The characteristic of BeOSL is nearly tissue equivalent ($Z_{\text{eff}} = 7.13$). We have plan to provide BeOSL for the lens of eye dosimeter to nuclear medicine staffs which exposed with gamma and beta from radioisotopes. In this study, the eye lens doses assessment in nuclear medicine will be evaluated by correction factor of $H_p(3)/H_p(0.07)$ and calibrated with $^{90}\text{Sr}/^{90}\text{Y}$ using a cylinder phantom and ISO rod phantom respectively. $H_p(3)$ for radionuclides used for nuclear medicine such as ^{131}I , $^{99\text{m}}\text{Tc}$ and ^{68}Ga , will be calculated using correction factor for eye lens dose from small BeOSL dosimeters inserted in a cylinder phantom at depth 3 mm."

4. What are the future plans at TINT?

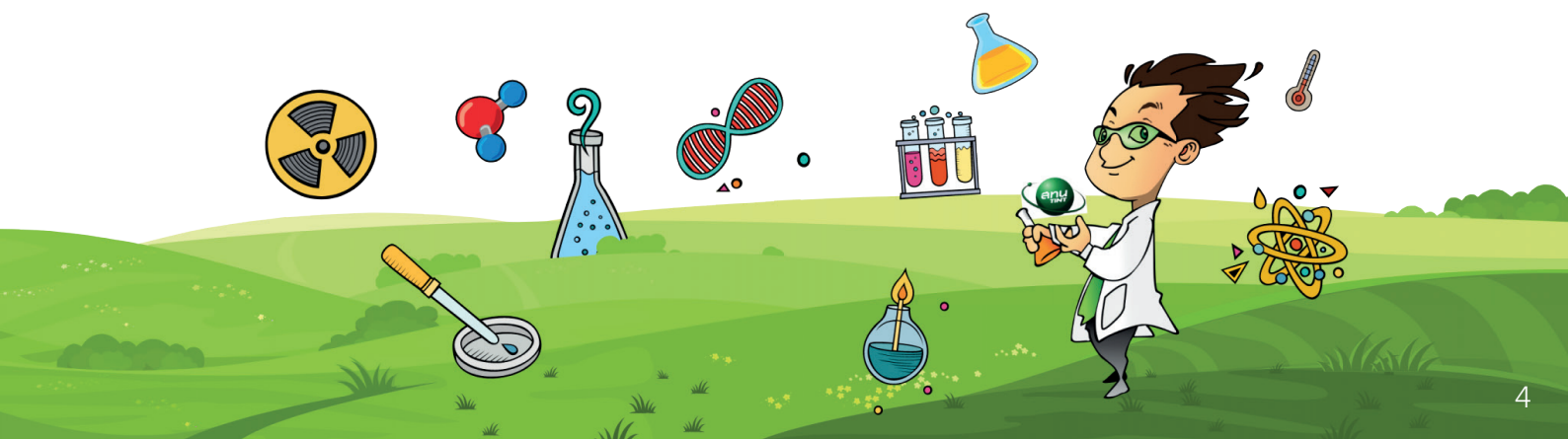
"We are studying in entrance surface air kerma dose (ESAK) evaluation by using nanodot dosimeters compared with dose meter. We exposed nanodots with Xray general machine in free air at technique 50, 60, 70, 80, 90, 100, 110 and 120 kV. The doses were calculated from correction factor with energy response relative to delivered dose of Al_2O_3 . We found at low energy the dose evaluation had low accuracy. As the performance of BeOSL which has a good energy response to photon will help us to evaluate entrance surface dose with excellent results."

5. Is there any other relevant information that you'd like to share with us and other Dosimetrics users?

"TINT will have a plan to provide BeOSL dosimeters to customers in the next year. We are performing all documents and information related to comply with ISO/IEC 17025. The intercomparison for whole body and extremity dosimeters are required for Individual Monitoring Service (IMS) laboratory to improve standard and accuracy of personal dose equivalent evaluation to measure $H_p(10)$, $H_p(0.07)$ and $H_p(3)$ for photon and beta radiations. In the past five years, IMS Laboratories in South East Asia region provided free of charge intercomparison programs performed by Office of Atoms for Peace, Thailand. In this region, we have still used TLD, InLight and nanoDot dosimeters. We hope, many other professional labs will participate in our intercomparison program and share their information on BeOSL."



To learn more about TINT, visit their [website](http://www.tint.or.th) or contact them: osl@tint.or.th





BeOSL Finger Ring Dosimeter

*Now approved as official dosimetry
also in Germany*

We are very pleased to announce that our OSL Finger Ring Dosimeter has been approved as an official dosimeter in Germany by the BMU in addition to its PTB type approval.



INTRODUCING

New Marketing-Manager: Nadine Berger

We gladly welcome Nadine as our new Marketing Manager since June 2022.

Nadine is a qualified radiological technologist and worked for several years in radiotherapy.

Since 2018 she has already been part of the "Auswertungsstelle für Strahlendosimeter (AWST)". Until now, she worked in customer service for the dosimetry service of Mirion Technologies (AWST) GmbH.

As a former occupational radiation exposed person who has worked in both a large clinic and medical office, Nadine understands the needs of our dosimetry service clients. She has been able to further develop and deepen this sensitivity and knowledge through her work in AWST's customer service.

In the broadest sense, as an AWST employee, she also was a former Dosimetrics customer and knows all about the processes and challenges that a Dosimetry service has to face.

We are sure to have found with Nadine the right choice for the big gap Alyce leaves behind.

We wish you all the best for your start!

Rina *Gerl*



MEET NADINE, 32



Position:

Marketing Manager

Education:

Radiological technologist

Loves:

 Cycling

 Camping

 Knitting



Back on the road

As the pandemic situation finally allows it, we can participate in trade shows again. Tobias in particular is already busy on the road, maybe you have met him or one of our colleagues at one or the other event...



IM 2022 / NEUDOS 14

Reiner and Tobias were in Krakow (PL) from April 25 - 29 at the "IM2022 / NEUDOS 14".

Especially the Wednesday evening will remain in our good memories for a long time. ☺

SRP Annual Meeting 2022

From June 14 - 16 Tobias was at the SRP Annual Meeting in Llandudno (UK) with our colleagues from Dositracker, Colyn and Codrut.



EURADOS Annual Meeting 2022

...and since Tobias can't get enough of traveling, you could also have met him in Belgrade (SRB) from June 20-24.

Want to see what
we are up to?

Follow us!



Mirion Technologies (AWST) GmbH
Dosimetrics
Otto-Hahn-Ring 6
81739 München, Germany
www.dosimetrics.de
info@dosimetrics.de



MIRION
TECHNOLOGIES

Dosimetry Service (AWST)