

IFA
Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung

Occupational exposure of workers with

GENESIS-UV
Generation and Extraction System for Individual exposure

Dosimetry in Germany, Europe and the World

GENESIS-UV, Dr. Marc Wittlich, 3rd Intersun Conference, Melbourne
01.02.2016

GENESIS-UV
Generation and Extraction System for Individual exposure

What is GENESIS-UV and how does it work?

GENESIS-UV is a system to provide...

- ✓ Decentral, world wide applicable,
- ✓ fully automated exposure measurements
- ✓ with automatic data transfer via mobile service,
- ✓ on-site storage of data
- ✓ and minimal impairment of test persons.

„To solve our Grand Challenges in Prevention“

- Activity-Exposure-Matrix
- Identification of hazardous activities
- Risk assessment
- Preventive measures
- Protection concept

**incl. exposure in vehicles
incl. exposure in buildings
incl. assessment of preventive measures**

“Worldwide, between 50 and 90% of skin cancers are due to UV Radiation”

Germany: 25 000 – 40 000 cases of squamous cell carcinoma (SCC) per year; approx. 10 times more actinic keratoses per year

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Germany: Acquired data so far...

- ... 2.500.000.000 data points from
- ... 700.000 working hours
- ... or 30.000 working days
- ... in more 100 different jobs!

... and we keep on going!!

For example...

Germany: Measurement period 1st April to 31st October

Daily measuring time 7:30 to 17:30

Data rate 1 point per second

this one took the biscuit (so far)

German people: 2,5 SED weekly (12% SED/day)

Road construction, Bavaria

19th May	20th May	21st May	22nd May	23rd May
5,32 SED	6,12 SED	8,53 SED	7,80 SED	5,41 SED

33,2 SED in this 5-days week!

GENESIS-UV
Long-term measurements of workers during their occupational activities

The electronic dosimeter

- metal case (waterproof)
- UV-A-sensor / UV-B/C-sensor
- „pause“-switch
- USB 2.0 connector
- accelerometer
- compass
- temperature
- time and date

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Actual activities

EADV European Academy of Dermatology and Venereology

Antarctica

Aim: World-wide cadastre of UV exposure

Interest?

Questions?

Cooperation?

Contact details

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