



# Indoor Air Comfort Product Certification -

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**Eurofins Product Testing**



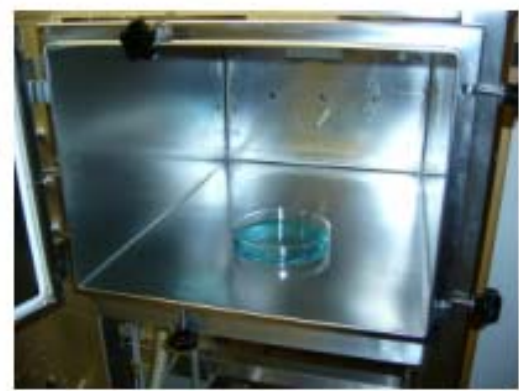
- Long tradition, due to reduced ventilation following better insulation of buildings after the "oil shock"
- In the beginning:
  - First mainly scientific approaches, not always useable in real life
  - Limited knowledge on products and emission behaviour of relevant compounds
  - No harmonisation of testing methods
- Today IAQ is part of sustainable developments (ventilation, climate, contaminants, moulds, ...)
  - Some of the issues involved:
    - material development
    - emission of volatile organic compounds (VOCs) from products

- **Three reasons for testing:**
  - Legal requirements and limit values (Germany, Japan, California)
  - Ecolabels (M1, Blue Angel, EMICODE, GUT, BIFMA, Floor Score, CRI, ...)
  - Customers (e.g. sustainable buildings, LEED, IKEA)
- **Main activity today in USA, Japan, Germany, France, Finland**
- **Emission Testing: ISO 16000 standards as core principle, accreditations basically valid on a world wide basis:**
  - Part 3 (Aldehydes)
  - Part 6 (VOC; TVOC)
  - Part 9 (chamber) (earlier: EN 13419-1)
  - Part 10 (FLEC) (earlier: EN 13419-2)
  - Part 11 (Test specimen) (earlier: EN 13419-3)

# Emission Testing



Photo: Eurofins Environment AB



No official umbrella testing protocol available!!



DIBt



# Combination of Testing - example

Sampling / Testing	AgBB / DIBt	M1	AFSSET	Section 01350 FloorScore
VOC after 3 days	X		X	
VOC after 28 days	X **	X	X	
VOC at other dates	**			11d, 12d, 14d
Aldehydes 28 days	( X )	X	X	
Aldehydes at other dates	**			11d, 12d, 14d
Ammonia 28 days		X		
Odour test 28 days		X		
NIK/LCI calculation	X		X	X

\*\* Test may be stopped after 3 or 7 days tests in case of low emissions

- **CE Mark (European Union) and Ü mark (Germany):**
  - Initial Type Testing, repeated full testing after 3 or 5 years, third party auditing, control samples and testing e.g. once per year
    - with emission testing applied only for certain products, e.g. floorings
- **Industry labels (Europe) GUT, EMICODE, CertiPUR:**
  - Initial tests, repeated tests after 3 or 5 years, and market control tests on an annual basis
- **Governmental labels (Europe) Blue Angel, M1:**
  - Initial tests, repeated tests after 3 or 5 years
- **USA - CARB, CRI, Floor Score, BIFMA, LEED, Greenguard:**
  - Initial tests, repeated tests after ¼ or 1 or 2 years, third party auditing
- **Europe: All voluntary labels are without third party auditing !**

# Indoor Air Comfort - certified product

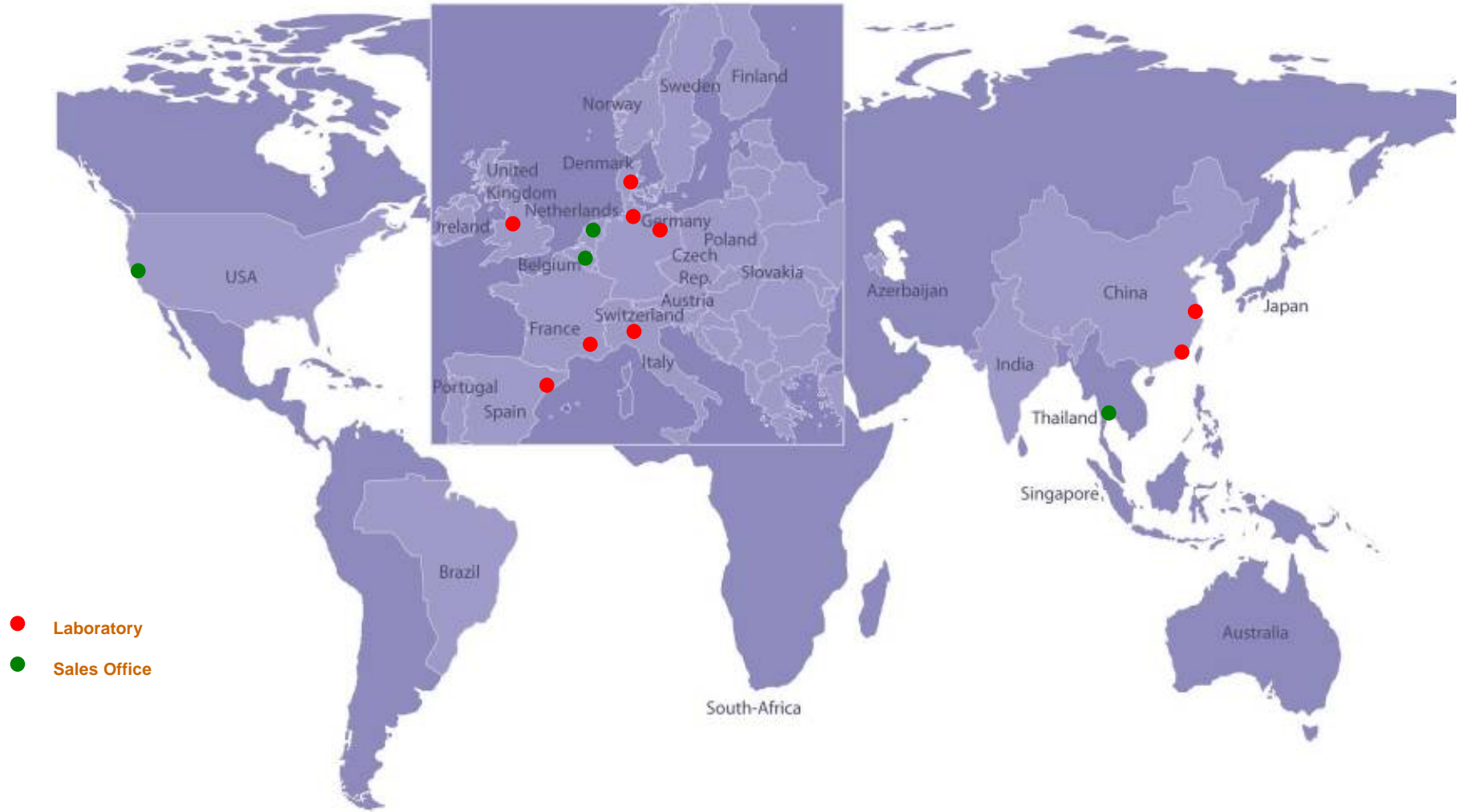
- Certificate = VOC Emissions are sufficiently low that all national EU labels can be applied for
- Differentiation between good product and better product:
  - Indoor Air Comfort:  
Low emissions, conform with all governmental specifications in EU:  
AgBB, AFSSET, E1
  - Indoor Air Comfort Gold  
Very low emissions, conform with all voluntary specifications in EU:  
M1, Blue Angel, Austrian UZ, GUT, EMICODE, CertiPUR, IKEA, ...
- Covers only product emission into Indoor Air



- 1. Initial Type Testing in test chamber**  
(Testing schedule will be product type specific)
- 2. Evaluation of test result**  
(Criteria will be product type specific)
- 3. Contract between manufacturer and certifier**  
including agreements on exclusion of certain raw material,  
factory production control, QC documentation
- 4. Third party auditing of production sites on regular basis**  
including control of emission relevant documentation in QC
- 5. Certificate, may be used for marketing purposes**
- 6. Eurofins test reports are accepted by most EU labels**
- 7. Repeated tests on an regular basis for more reliability of forecast**
- 8. Continuous review and improvement**  
of specifications, testing procedures and audit procedures

- **Sustainable building (LEED, HQE, BREEAM, DGNB):**
  - Requires a.o. products with low impact on Indoor Air Quality
- **Product Emission Testing:**
  - Can show low impact of product on Indoor Air Quality
- **Eurofins Indoor Air Comfort certification:**
  - Overcomes national and industry-wise variety of specifications
  - Does not create new requirements - no re-invention of the wheel
  - Certification = forecast, not only status of today
  - Increases trust by higher control intensity
  - Allows using Eurofins certificate where nothing else exists
- **Eurofins Vision:**
  - Bring together such certification systems across the Atlantic

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- Laboratory
- Sales Office