Indoor air quality in European baby rooms

A study conducted by WECF and INC/60 Millions de Consommateurs in 4 countries (DE, NL, FR, GR)

1. 40% of the rooms have bad indoor air quality

What did we test?
Where? 4 countries (FR, DE, GR, NL)
Who? 15 to 20 participants in each country
What? Newly renovated and furnished baby rooms
How? Two air samplers per baby room
Which pollutants? Formaldehyde and total Volatile Organic Compounds (VOC)

What did we find?
40% of the baby rooms had formaldehyde or VOC levels above the guidelines (10µg/m³ formaldehyde and 200 µg/m≥total VOC).

2. Countries’ specificities

All participants have ventilation habits differing from one country to another but generally above good ventilation standards.

Good ventilation habits in the 4 countries
(these values do not produce a comprehensive picture of ventilation habits in Europe)

In the four countries, 50% of the participants ventilate more than 1 hour per day. Globally, a total of 75% of participants ventilate more than 15 minutes per day, considered a good ventilation standard.

France
- All families of VOC detected in poor or high concentrations depending on samplers
- 42% of the participants are above VOC guidelines

Netherlands
- All families of VOC detected in rather poor concentrations
- 31% of the participants above VOC guidelines

Greece
- Generally rather light VOC found, contrary to Germany
- 28% of participants above formaldehyde guidelines

Germany
- Country with less VOC
- 21% of the participants above formaldehyde guidelines

3. Which pollutants of high concern did we find?

Compounds such as formaldehyde, hydrocarbons, terpenes, known carcinogens and allergens, were found in the baby rooms.

Formaldehyde
Preservative used in plywood, glues, varnishes, carpets, textiles
Health effects known carcinogen, irritations of the eyes, nose, throat, triggers allergy and asthma

Alcohols
Ethanol, methanol, isopropanol, etc.
Health effects headaches, irritations of the eyes, nose, throat, skin, mucous membranes

Ketones
type acetone, 2-butanone, etc.
Health effects irritations of the eyes, nose, throat, affects the nervous central system

Hydrocarbons
benzene, toluene, xylenes, alcanes C9 to C13, found in paints, varnishes and wood preservatives
Health effects Irritations of the eyes, digestive problems, headaches, some are carcinogens

Terpenes
eucalyptol, limonene, etc.
Health effects allergens, irritations of the eyes, skin, harmful if swallowed

For children, who are especially vulnerable, the EU INDEX program advises a 1 µg/m³ value for all exposures, whether acute or chronic.