

## Potential Formaldehyde Sources in the Indoor Environment as Determined in Different









Source	Comments
<b>Wood and Wood-Based Products</b>	
solid wood	oak, Douglas fir, beech, spruce, pine
particle board	effect of hot-pressing
particle board	recycled wood-waste sprayed with PMDI/PF
particle board, MDF	comparison of standard methods
particle board	effect of aging
particle board	effect of humidity and temperature
oriented-strand board	comparison of analytical techniques
wood-based composites	laminate, engineered flooring, MDF, particle board
wood based panels	effect of loading and ventilation
wood panels	interlaboratory comparison
particle board, plywood	with carpet and insulation
pressed wood products	
wood-based flooring materials	effect of ozone, infrared, sunlight, UV-A, UV-B
<b>Insulation Materials</b>	
mineral wool	
mineral wool	interlaboratory comparison
<b>Flooring Materials</b>	
carpet	interaction of ozone
laminare	effect of temperature
Cork products	natural cork and cork tiles
building finishing materials	effect of temperature
<b>Coating Materials</b>	
latex paint	
latex paint	presence of ozone
water-based paint	emission of biocides
natural paint	presence of ozone
photocatalytic paint	effect of irradiation
<b>Combustion</b>	
wood burning	wood-heated homes in Quebec, Canada
wood burning	wood-heated homes in Sweden
cooking stoves	
cooking	residential cooking activities in a test house
burning of incense	measured in temples
cigarette smoking	
mosquito coils and candles	

<b>Miscellaneous</b>	
<b>laser printers, photocopiers</b>	
<b>miscellaneous building materials</b>	pine wood, gypsum board, wallpaper, carpet, PVC, linoleum, paint, and presence of ozone
<b>furniture and home equipment</b>	parquet, sofa, table, chair, carpet, book shelves
<b>miscellaneous building materials</b>	plywood, particle board, hard board, carpet, barrier materials
<b>miscellaneous building materials</b>	test house study
<b>textiles, permanent-press fabrics</b>	effect of aging, temperature, humidity
<b>wall coverings</b>	paper, acrylic, PVC
<b>cleaning products, air fresheners</b>	
<b>car air freshener</b>	presence of ozone
<b>chemical products</b>	formaldehyde and formaldehyde releasers 446
<b>cleaning activities</b>	
<b>household products</b>	presence of ozone
<b>consumer products</b>	55 materials studied
<b>miscellaneous materials</b>	carpet, wall, floor, cooking oil, and presence of ozone
<b>miscellaneous materials</b>	wood-based products, carpet, textiles, heaters, burners, cigarettes
<b>miscellaneous polymeric materials</b>	PVC, carpet, SBR, wall coverings, rubber foam backing
<b>VOC mixtures</b>	
<b>portable air cleaners</b>	with and without air fresheners
<b>miscellaneous materials</b>	ozone reactions during disinfection
<b>miscellaneous materials</b>	aircraft cabin materials and clothing fabrics

Source: Tunga Salthammer et al. (2015), Formaldehyde in the Indoor Environment, Chem. Rev.

### Formaldehyde Reduction of pot plants

Sample	Picture	relative Leaf area	% HCOH Reduction	Final HCOH ppm

<b>Pot Media</b>		-	6.67%	1.654
<i>Scindapsus aureus</i> (Golden pothos)		++	79.72%	0.315
<i>Chloroptum Comosum</i> (Spider Plant)		+	35.80%	0.997
<i>Kalanchoe Blossfeldiana</i> (Flaming Katy)		+	36.06%	0.993
<i>Homalomena wallisii</i> (Homalomena Rubescens Kunth)		+++	60.27%	0.617
<i>Sansevieria</i> (Mother-in-laws Tongue)		++	63.68%	0.564
<i>Dracaena Fragrans</i>		+++	54.92%	1.412
<i>Nephrolepis exaltata</i>		+++	61.09%	0.434

Source: Jinsart, Wanida at al. 2016, Removal of formaldehyde from the indoor environment by pot-plants and Agriculture wastes, casanz conference.