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[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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[\[PDF \(1489K\)\]](#) [\[References\]](#)

## Field Measurement of Carbonyl Compound Concentration in Indoor Air of Wooden Residential Houses Newly Constructed from 2001 to 2002

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**Abstract:** Carbonyl compound concentration was surveyed in the indoor air of fifty-two new wooden residential houses constructed with different construction methods from 2001 to 2002. House construction method did not affect the carbonyl concentration of the indoor air. Actual air concentration of formaldehyde was 0.118 ppm on average. However, the concentration converted to 28°C/50%RH was almost the same as the guideline value (0.08 ppm). About half of the surveyed houses had formaldehyde concentrations more than the guideline value. Average actual air concentration of acetaldehyde was 0.171 ppm, nearly six times greater than the guideline value (0.03 ppm). Increasing the amount of wood-based material used, the acetaldehyde air concentration decreased, but the formaldehyde air concentration did not.

**Keywords:** indoor air, new wooden house, formaldehyde, acetaldehyde, wood-based material

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