

AIR MOVEMENT & VENTILATION CONTROL WITHIN BUILDINGS

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Performance Evaluation of Kitchen Hoods

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**TITLE :** Performance evaluation of kitchen hoods

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Abstract

Kitchen hoods are frequently found in Belgian kitchens. Most of them have as only function intensive ventilation during certain cooking activities. It is expected that kitchen hoods with appropriate performances can also play an important role as device for guaranteeing basic ventilation.

The aims of the research can be summarized as follows :

- How do occupants evaluate the performances of existing kitchen hoods?
- What are the sound levels (dB(A)) in various locations in these dwellings due to the kitchen hood?
- What are the flow rate performances of old and new kitchen hoods in occupied dwellings and in the laboratory?
- What are the measured ventilation efficiencies in the laboratory?

The project focusses as well on existing kitchen hoods as on the most recent models of kitchen hoods.

In order to come to representative answers, the following actions are planned (they will be largely finished at the time of the conference) :

- an enquiry in some 200 randomly selected dwellings and some 50 dwellings with new kitchen hoods. These 50 dwellings were suggested by the manufacturers.
- Sound level measurements in 4 locations of each dwellings as well as flow rate measurements (with compensated flow meter and/or tracer gas) in occupied dwellings.
- Flow rate and ventilation efficiency measurements in the laboratory on common and new kitchen hoods.

The results till now indicate that often very high sound levels are found (up to 80 db(A)) and that there are a lot complaints about noise problems. Fortunately, several good systems allowing to achieve the required flow rates at very low sound levels exist.