

**INDOOR AIR QUALITY MONITORING AND ASSESSMENT. STATE
OF THE ART AND CURRENT SURVEYS. INTERNATIONAL PANORAMA WITH A
PARTICULAR FOCUS ON FRENCH SURVEY**

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The aim of this work is to describe European and North-American national surveys on indoor air quality (IAQ) and to compare their designs and results. This on-going international review is carrying out for the "French permanent survey on Indoor Air Quality" (OQAI). Created by the French government in 2001, OQAI have ordered a first review on national knowledge on IAQ (1990-2000) in order to identify existing data and gaps. In 2001, a pilot study allowed to test and valid sampling methods and analytical procedures for a large number of pertinent pollutants. Moreover, a risked-based ranking analysis was developed for prioritising 70 pollutants. With regards to the conclusions from those preliminary actions, a first French nation-wide campaign on a random sample of 710 dwellings started in 2003, October to achieve in early 2005. Samplings of outdoor and indoor air (allergens, fungi, VOC and aldehydes, CO, particles, radon and gamma ray) take place during one week in each housing. They are completed with a time-activity diary filled by occupants and descriptive data on dwellings and their local environment inquired by investigators. The update of the other French IAQ studies review (2001-2003) has been recently achieved. Moreover, since IAQ varies across countries in terms of quality (composition) or quantity (level) because of the differences in potential indoor pollution sources (building and furniture characteristics, combustion such as gas cooking, cleaning activities and products, use of cosmetics or pesticides...), OQAI enlarged its state of the art on IAQ to international survey campaigns. Because African or Asiatic housing characteristic can be very different from those in France, comparison is limited to Europe, United-States and Canada. Moreover, since there are now a lot of studies on IAQ (generally focussed to a limited number of pollutant, restricted to a local area... and so little representative of exposure at a national level), only national survey or multicentric studies will be integrated in this international state of the art (scientific publications, website information...). This international comparison between national surveys on IAQ (in terms of design such as results) will be used by OQAI to bring out its further actions, to define new priorities in terms of measurement in its future campaigns (which pollutants, which microenvironments?) and to promote research (in terms of metrology such as toxicology) concerning "new" or "specific" indoor air pollutants.