



Veille scientifique sur le thème *Santé Environnement intérieur*

2005 – 4^{ème} trimestre

180 articles ont été répertoriés pendant la période du 11 octobre 2005 au 20 février 2006.

Les articles sont classés selon les chapitres suivants :

I- SUBSTANCES

- I-1. Gaz inorganiques (radon, O₃, NO_x, CO)
- I-2. Composés Organiques Volatils et Composés Organiques Semi-Volatils
- I-3. Particules
- I-4. Biocontaminants
- I-5. Pesticides / biocides
- I-6. Métaux
- I-7. Fumée de tabac environnementale

II- LIEUX DE VIE

- II-1. Habitat privé
- II-2. Transports
- II-3. Autres lieux de vie : écoles, bureaux, espaces de loisirs, lieux publics
- II-4. Ventilation
- II-5. Modélisation
- II-6. Relations air intérieur - air extérieur

III- EFFETS SANITAIRES

- III-1. Effets chez l'animal
- III-2. Effets chez l'homme
- III-3. Populations sensibles

IV- EVALUATION DES RISQUES

- IV-1. Expologie : mesure de l'exposition et ses outils (indicateurs biologiques, budgets espace-temps)
- IV-2. Evaluation des risques

V- GESTION / REMEDIATION

VI- ARTICLES GENERAUX SUR LA THEMATIQUE

Chaque article, à l'exception des articles de synthèse qui sont compilés en fin de document, n'apparaît que dans un seul chapitre. Le lecteur est dès lors invité à compléter sa consultation d'un chapitre particulier par une recherche par mot-clé.

Le lecteur est invité à se reporter à la note relative à la veille scientifique pour la liste des revues et bases de recherche bibliographique consultées dans le cadre de la veille scientifique menée par le réseau RSEIN.



I- SUBSTANCES

I-1. Gaz inorganiques

- RADON

1. Neman, R., J. C. Hadler, et al. (2005). "Inter-comparison of three techniques for radon activity measurements." *Radiation Measurements* 40(2-6): 295-298.
2. Arafa, W., H. Badran, et al. (2005). "Effect of moving air and variable radon concentration on the response of charcoal canister." *Radiation Measurements* 40(2-6): 662-665.
3. von Philipsborn, H. and G. Just (2005). "Fast retrospective determination of radon exposure with a sensitive alpha scintillation probe." *Journal of Radiological Protection* 25(3): 299-303.
4. Dwivedi, K. K., R. Mishra, et al. (2005). "An extensive indoor Rn-222/Rn-220 monitoring in North-East India." *Radiation Measurements* 40(2-6): 621-624.
5. Mansour, H. H., S. P. Khdar, et al. (2005). "Measurement of indoor radon levels in Erbil capital by using solid state nuclear track detectors." *Radiation Measurements* 40(2-6): 544-547.

- Autres gaz inorganiques

6. Molhave, L., S. K. Kjaergaard, et al. (2005). "Interaction between ozone and airborne particulate matter in office air." *Indoor Air* 15(6): 383-392.
7. Ongwande, M., S. S. Bettinger, et al. (2005). "The influence of ammonia and carbon dioxide on the sorption of a basic organic pollutant to a mineral surface." *Indoor Air* 15(6): 408-419.

I-2. COV, CO Semi-Volatils

- COV

8. Sritharathikhun, P., M. Oshima, et al. (2005). "On-line collection/concentration of trace amounts of formaldehyde in air with chromatomembrane cell and its sensitive determination by flow injection technique coupled with spectrophotometric and fluorometric detection." *Talanta* 67(5): 1014-1022.
9. Tumbiolo, S., J. F. Gal, et al. (2005). "SPME sampling of BTEX before GC/MS analysis: Examples of outdoor and indoor air quality measurements in public and private sites." *Annali Di Chimica* 95(11-12): 757-766.
10. Kuntasal, O. O., D. Karman, et al. (2005). "Determination of volatile organic compounds in different microenvironments by multibed adsorption and short-path thermal desorption followed by gas chromatographic-mass spectrometric analysis." *Journal of Chromatography A* 1099(1-2): 43-54.
11. Larroque, V., V. Desauziers, et al. (2006). "Development of a solid phase microextraction (SPME) method for the sampling of VOC traces in indoor air." *Journal of Environmental Monitoring* 8(1): 106-111.
12. S.C. Lee and B. Wang ; Characteristics of emissions of air pollutants from mosquito coils and candles burning in a large environmental chamber ; *Atmospheric Environment*, Volume 40, Issue 12 , April 2006, Pages 2128-2138
13. Nalli, S., O. J. Horn, et al. (2006). "Origin of 2-ethylhexanol as a VOC." *Environmental Pollution* 140(1): 181-185.

14. McDermott, M. J., K. A. Mazor, et al. (2005). "Tetrachloroethylene (PCE, perc) levels in residential dry cleaner buildings in diverse communities in New York City." Environmental Health Perspectives 113(10): 1336-1343.
15. Zhu, J. P., H. Li, et al. (2005). "Prediction of initial emission rates of 2-butoxyethanol from consumer products using equilibrium headspace concentrations: An application of the vapor pressure and boundary layer (VB) model." Environmental Science & Technology 39(21): 8214-8219.
16. W. Liu, J. Zhang, L. Zhang, B.J. Turpin, C.P. Weisel, M.T. Morandi, T.H. Stock, S. Colome and L.R. Korn ; Estimating contributions of indoor and outdoor sources to indoor carbonyl concentrations in three urban areas of the United States ; Atmospheric Environment Volume 40, Issue 12 , April 2006, Pages 2202-2214

ARTICLE DE SYNTHÈSE

17. Wolkoff, P., C. K. Wilkins, et al. (2006). "Organic compounds in office environments - sensory irritation, odor, measurements and the role of reactive chemistry." Indoor Air 16(1): 7-19.
 - **Semi-volatils**
18. Xu, Y. and J. C. Little (2006). "Predicting emissions of SVOCs from polymeric materials and their interaction with airborne particles." Environmental Science & Technology 40(2): 456-461.
19. Bornehag, C. G., B. Lundgren, et al. (2005). "Phthalates in indoor dust and their association with building characteristics." Environmental Health Perspectives 113(10): 1399-1404.
 - **Odeurs**
20. Cain, W. S., R. A. de Wijk, et al. (2005). "Odor and chemesthesis from brief exposures to TXIB." Indoor Air 15(6): 445-457.

I-3. Particules

21. Olson, D. A. and G. A. Norris (2005). "Sampling artifacts in measurement of elemental and organic carbon: Low-volume sampling in indoor and outdoor environments." Atmospheric Environment 39(30): 5437-5445.
22. Olson, D. A. and J. M. Burke (2006). "Distributions of PM2.5 source strengths for cooking from the research triangle park particulate matter panel stud." Environmental Science & Technology 40(1): 163-169.
23. Hubbard, H. F., B. K. Coleman, et al. (2005). "Effects of an ozone-generating air purifier on indoor secondary particles in three residential dwellings." Indoor Air 15(6): 432-444.
24. Lee, S. J., P. Demokritou, et al. (2006). "Development and evaluation of personal respirable particulate sampler (PRPS)." Atmospheric Environment 40(2): 212-224.
25. Potgieter-Vermaak, S. S. and R. van Grieken (2006). "Preliminary evaluation of micro-Raman spectrometry for the characterization of individual aerosol particles." Applied Spectroscopy 60(1): 39-47.
26. Wallace, L. (2005). "Ultrafine particles from a vented gas clothes dryer." Atmospheric Environment 39(32): 5777-5786.

I-4. Biocontaminants

27. Robine, E., I. Lacaze, et al. (2005). "Characterisation of exposure to airborne fungi: Measurement of ergosterol." Journal of Microbiological Methods 63(2): 185-192.
28. Jo, W. K. and Y. J. Seo (2005). "Indoor and outdoor bioaerosol levels at recreation facilities, elementary schools, and homes." Chemosphere 61(11): 1570-1579.

29. Hicks, J. B., E. T. Lu, et al. (2005). "Fungal types and concentrations from settled dust in normal residences." *Journal of Occupational and Environmental Hygiene* 2(10): 481-492.
30. Herrera, J. (2005). "Assessment of fungal growth on sodium polyborate-treated cellulose insulation." *Journal of Occupational and Environmental Hygiene* 2(12): 626-632.
31. Wady, L., D. R. Parkinson, et al. (2005). "Methyl benzoate as a marker for the detection of mold in indoor building materials." *Journal of Separation Science* 28(18): 2517-2525.
32. Godish, T. J. and D. R. Godish (2006). "Mold infestation of wet spray-applied cellulose insulation." *Journal of the Air & Waste Management Association* 56(1): 90-95.
33. Cetinkaya, Z., F. Fidan, et al. (2005). "Assessment of indoor air fungi in Western-Anatolia, Turkey." *Asian Pacific Journal of Allergy and Immunology* 23(2-3): 87-92.
34. Brasel, T. L., A. W. Campbell, et al. (2004). "Detection of trichothecene mycotoxins in sera from individuals exposed to *Stachybotrys chartarum* in indoor environments." *Archives of Environmental Health* 59(6): 317-323.
35. Zeng, Q. Y., S. O. Westermarck, et al. (2006). "Detection and quantification of Cladosporium in aerosols by real-time PCR." *Journal of Environmental Monitoring* 8(1): 153-160.
36. Brasel, T. L., J. M. Martin, et al. (2005). "Detection of airborne Stachybotrys chartarum macrocyclic trichothecene mycotoxins in the indoor environment." *Applied and Environmental Microbiology* 71(11): 7376-7388.
37. Li, D. W. and C. S. Yang (2005). "Taxonomic history and current status of Stachybotrys chartarum and related species." *Indoor Air* 15: 5-10.
38. Bouillard, L., O. Michel, et al. (2005). "Bacterial contamination of indoor air, surfaces, and settled dust, and related dust endotoxin concentrations in healthy office buildings." *Annals of Agricultural and Environmental Medicine* 12(2): 187-192.
39. Weghofer, M., W. R. Thomas, et al. (2005). "Comparison of purified Dermatophagoides pteronyssinus allergens and extract by two-dimensional immunoblotting and quantitative immunoglobulin E inhibitions." *Clinical and Experimental Allergy* 35(10): 1384-1391.
40. Sarkar, P., D. Ghosh, et al. (2005). "Screen-printed biosensor for allergens." *Journal of Chemical Technology and Biotechnology* 80(12): 1389-1394.
41. van den Bemt, L., M. P. de Vries, et al. (2006). "Influence of mattress characteristics on house dust mite allergen concentration." *Clinical and Experimental Allergy* 36(2): 233-237.
42. Bollinger, M. E., A. Butz, et al. (2005). "Contamination of nebulizers with environmental allergens." *Annals of Allergy Asthma & Immunology* 95(5): 429-432.
43. Awad, A. H. A. (2005). "Vegetation: A source of air fungal bio-contaminant." *Aerobiologia* 21(1): 53-61.
44. Abraham, J. H., D. R. Gold, et al. (2005). "Within-home versus between-home variability of house dust endotoxin in a birth cohort." *Environmental Health Perspectives* 113(11): 1516-1521.
45. Thorne, P. S., N. Metwali, et al. (2005). "Surface sampling for endotoxin assessment using electrostatic wiping cloths." *Annals of Occupational Hygiene* 49(5): 401-406.
46. Hyvarinen, A., M. Roponen, et al. (2006). "Dust sampling methods for endotoxin - an essential, but underestimated issue." *Indoor Air* 16(1): 20-27.

I-5. Pesticides

47. Obendorf, S. K., A. T. Lemley, et al. (2006). "Distribution of pesticide residues within homes in central new York State." *Archives of Environmental Contamination and Toxicology* 50(1): 31-44.
48. Curwin, B. D., M. J. Hein, et al. (2005). "Pesticide contamination inside farm and nonfarm homes." *Journal of Occupational and Environmental Hygiene* 2(7): 357-367.
49. Arbuckle T.E., D. B., Len Ritter and J Christopher Hall (2006). "Indirect sources of herbicide exposure for families on Ontario farms." *Journal of Exposure Analysis and Environmental Epidemiology* 16(1).

I-6. Métaux lourds

50. Garetano, G., M. Gochfed, et al. (2006). "Comparison of indoor mercury vapor in common areas of residential buildings with outdoor levels in a community where mercury is used for cultural purposes." *Environmental Health Perspectives* 114(1): 59-62.

I-7. Fumée de tabac environnementale

51. Bi, X. H., G. Y. Sheng, et al. (2005). "Gas- and particulate-phase specific tracer and toxic organic compounds in environmental tobacco smoke." *Chemosphere* 61(10): 1512-1522.



II- LIEUX DE VIE

II-1. Habitat privé

- Contribution des appareils de combustion

52. Willers, S. M., B. Brunekreef, et al. (2006). "Gas cooking, kitchen ventilation, and exposure to combustion products." *Indoor Air* 16(1): 65-73.

II-2. Transports

53. Berger-Preiss, E., W. Koch, et al. (2006). "Aircraft disinsection: Exposure assessment and evaluation of a new pre-embarkation method." *International Journal of Hygiene and Environmental Health* 209(1): 41-56.
54. Boschi, N. and F. Haghighat (2005). Aircraft cabin indoor air environment requirements. *Air Quality in Airplane Cabins and Similar Enclosed Spaces*. 4H: 53-83.
55. Webster, A. D. and G. L. Reynolds (2005). Indoor air quality on passenger ships. *Air Quality in Airplane Cabins and Similar Enclosed Spaces*. 4H: 335-349.
56. Lee, J. H. and W. K. Jo (2005). "Exposure to airborne fungi and bacteria while commuting in passenger cars and public buses." *Atmospheric Environment* 39(38): 7342-7350.
57. Schupp, T., H. M. Bolt, et al. (2006). "Benzene and its methyl-derivatives: Derivation of maximum exposure levels in automobiles." *Toxicology Letters* 160(2): 93-104.
58. Yoshida, T. and I. Matsunaga (2006). "A case study on identification of airborne organic compounds and time courses of their concentrations in the cabin of a new car for private use." *Environment International* 32(1): 58-79.

II-3. Autres lieux de vie

- Ecoles

59. Zhang, G., J. Spickett, et al. (2006). "Indoor environmental quality in a 'low allergen' school and three standard primary schools in Western Australia." *Indoor Air* 16(1): 74-80.
60. Ramachandran, G., J. L. Adgate, et al. (2005). "Indoor air quality in two urban elementary schools-measurements of airborne fungi, carpet allergens, CO₂, temperature, and relative humidity." *Journal of Occupational and Environmental Hygiene* 2(11): 553-566.
61. Branis, M., P. Rezacova, et al. (2005). "The effect of outdoor air and indoor human activity on mass concentrations of PM₁₀, PM_{2.5}, and PM₁ in a classroom." *Environmental Research* 99(2): 143-149.
62. Bernstein, J. A., L. Levin, et al. (2005). "A pilot study to investigate the effects of combined dehumidification and HEPA filtration on dew point and airborne mold spore counts in day care centers." *Indoor Air* 15(6): 402-407.

- Bureaux

63. Zuraimi, M. S., C. A. Roulet, et al. (2006). "A comparative study of VOCs in Singapore and European office buildings." *Building and Environment* 41(3): 316-329.

- **Lieux publics**

64. Tang, J. H., C. Y. Chan, et al. (2005). "Volatile organic compounds in a multi-storey shopping mall in guangzhou, South China." *Atmospheric Environment* 39(38): 7374-7383.
65. Laurenco, P. B., E. Luso, et al. (2006). "Defects and moisture problems in buildings from historical city centres: a case study in Portugal." *Building and Environment* 41(2): 223-234.

- **Musées**

66. Baggio, P., C. Bonacina, et al. (2004). "Microclimate analysis of the Scrovegni Chapel in Padua - Measurements and simulations." *Studies in Conservation* 49(3): 161-176.
67. Schieweck, A., B. Lohrengel, et al. (2005). "Organic and inorganic pollutants in storage rooms of the Lower Saxony State Museum Hanover, Germany." *Atmospheric Environment* 39(33): 6098-6108.

- **Hôpitaux**

68. Pastuszka, J. S., E. Marchwinska-Wyrwal, et al. (2005). "Bacterial aerosol in Silesian hospitals: Preliminary results." *Polish Journal of Environmental Studies* 14(6): 883-890.

II-4. Ventilation

69. Johnson T., a. T. L. (2005). "Determining the frequency of open windows in residences: a pilot study in Durham, North Carolina during varying temperature conditions." *Journal of Exposure Analysis and Environmental Epidemiology* 15(4): 329-349.
70. Bornehag, C. G., J. Sundell, et al. (2005). "Association between ventilation rates in 390 Swedish homes and allergic symptoms in children." *Indoor Air* 15(4): 275-280.
71. Richmond-Bryant, J., A. D. Eisner, et al. (2006). "Short-term dispersion of indoor aerosols: can it be assumed the room is well mixed?" *Building and Environment* 41(2): 156-163.
72. Richmond-Bryant, J., A. D. Eisner, et al. (2006). "Transport of airborne particles within a room." *Indoor Air* 16(1): 48-55.
73. Zota, A., G. Adarnkiewicz, et al. (2005). "Ventilation in public housing: implications for indoor nitrogen dioxide concentrations." *Indoor Air* 15(6): 393-401.
74. Fick, J., L. Pommer, et al. (2005). "Ozonolysis of monoterpenes in mechanical ventilation systems." *Atmospheric Environment* 39(34): 6315-6325.
75. Beko, G., O. Halas, et al. (2006). "Initial studies of oxidation processes on filter surfaces and their impact on perceived air quality." *Indoor Air* 16(1): 56-64.

ARTICLE DE SYNTHÈSE

76. Seppanen, O., W. J. Fisk, et al. (2006). "Ventilation and performance in office work." *Indoor Air* 16(1): 28-36.

II-5. Modélisation

- **Modélisation des émissions**

77. Liao, C. M., C. F. Chang, et al. (2005). "A probabilistic transmission dynamic model to assess indoor airborne infection risks." Risk Analysis 25(5): 1097-1107.
78. Hussein, T., H. Korhonen, et al. (2005). "Emission rates due to indoor activities: Indoor aerosol model development, evaluation, and applications." Aerosol Science and Technology 39(11): 1111-1127.

- **Modélisation des flux d'air et des concentrations**

79. Chen, F. Z., S. C. M. Yu, et al. (2006). "Modeling particle distribution and deposition in indoor environments with a new drift-flux model." Atmospheric Environment 40(2): 357-367.
80. Lin, Z., F. Jiang, et al. (2006). "CFD analysis of ventilation effectiveness in a public transport interchange." Building and Environment 41(3): 254-261.

II-6. Air extérieur – Air intérieur

81. Lee, T., S. A. Grinshpun, et al. (2006). "Relationship between indoor and outdoor bioaerosols collected with a button inhalable aerosol sampler in urban homes." Indoor Air 16(1): 37-47.
82. Millington, W. M. and J. M. Corden (2005). "Long term trends in outdoor Aspergillus/Penicillium spore concentrations in Derby, UK from 1970 to 2003 and a comparative study in 1994 and 1996 with the indoor air of two local houses." Aerobiologia 21(2): 105-113.
83. Wallace, L. (2005). "Real-time measurements of black carbon indoors and outdoors: A comparison of the photoelectric aerosol sensor and the aethalometer." Aerosol Science and Technology 39(10): 1015-1025.

- **Influence d'un événement extérieur**

84. Leonard, B. E. (2005). "Radioisotope deposition on interior building surfaces: Air flow and surface roughness influences." Nuclear Technology 152(3): 339-353.
85. Henderson, D. E., J. B. Milford, et al. (2005). "Prescribed burns and wildfires in Colorado: Impacts of mitigation measures on indoor air particulate matter." Journal of the Air & Waste Management Association 55(10): 1516-1526.

- **Influence du sol**

86. Sanders, P. F. and I. Hers (2006). "Vapor intrusion in homes over gasoline-contaminated ground water in Stafford, New Jersey." Ground Water Monitoring and Remediation 26(1): 63-72.
87. Gillmore, G. K., P. S. Phillips, et al. (2005). "The effects of geology and the impact of seasonal correction factors on indoor radon levels: a case study approach." Journal of Environmental Radioactivity 84(3): 469-479.
88. McHugh, T. E., P. C. De Blanc, et al. (2006). "Indoor air as a source of VOC contamination in shallow soils below buildings." Soil & Sediment Contamination 15(1): 103-122.



III- EFFETS SANITAIRES

III-1. Effets chez l'animal

89. Chung, Y. J., N. H. Coates, et al. (2005). "Dose-dependent allergic responses to an extract of Penicillium chrysogenum in BALB/c mice (vol 209, pg 77, 2005)." *Toxicology* 216(1): 72-84.
90. Tesfaigzi, Y., J. D. McDonald, et al. (2005). "Low-level subchronic exposure to wood smoke exacerbates inflammatory responses in allergic rats." *Toxicological Sciences* 88(2): 505-513.

III-2. Effets chez l'homme

91. Corburn, J., J. Osleeb, et al. (2006). "Urban asthma and the neighbourhood environment in New York City." *Health & Place* 12(2): 167-179.
92. Klitzman, S., J. Caravanos, et al. (2005). "Prevalence and predictors of residential health hazards: A pilot study." *Journal of Occupational and Environmental Hygiene* 2(6): 293-301.
93. Sezer, H., I. Akkurt, et al. (2006). "A case-control study on the effect of exposure to different substances on the development of COPD." *Annals of Epidemiology* 16(1): 59-62.
94. Skorge, T. D., T. M. L. Eagan, et al. (2005). "Indoor exposures and respiratory symptoms in a Norwegian community sample." *Thorax* 60(11): 937-942.
95. Tsai, J., W. E. Kaye, et al. (2006). "Wilms' tumor and exposures to residential and occupational hazardous chemicals." *International Journal of Hygiene and Environmental Health* 209(1): 57-64.
96. Meijer, A., M. A. J. Huijbregts, et al. (2005). "Human health damages due to indoor sources of organic compounds and radioactivity in life cycle impact assessment of dwellings - Part 2: Damage scores." *International Journal of Life Cycle Assessment* 10(6): 383-392.
97. Shantakumar, S., M. D. Gammon, et al. (2005). "Residential environmental exposures and other characteristics associated with detectable PAH-DNA adducts in peripheral mononuclear cells in a population-based sample of adult females." *Journal of Exposure Analysis and Environmental Epidemiology* 15(6): 482-490.
98. Shao, L. Y., H. Y. Zhao, et al. (2005). "Oxidative damages to DNA by indoor PM(10)s: Their relationships with trace element compositions." *Progress in Natural Science* 15(8): 694-699.

ARTICLE DE SYNTHÈSE

99. Richardson, G., S. Eick, et al. (2005). "How is the indoor environment related to asthma?: literature review." *Journal of Advanced Nursing* 52(3): 328-339.

- Radon

100. Bochicchio, F., G. Campos-Venuti, et al. (2005). "Annual average and seasonal variations of residential radon concentration for all the Italian Regions." *Radiation Measurements* 40(2-6): 686-694.
101. Baysson, H., M. Tirmarche, et al. (2005). "Indoor radon exposure and lung cancer risk. Results of an epidemiological study carried out in France." *Revue Des Maladies Respiratoires* 22(4): 587-594.
102. Lazar, I., E. Toth, et al. (2005). "An inverse association between cancer mortality rate of women and residential radon in 34 Hungarian villages." *Journal of Radioanalytical and Nuclear Chemistry* 266(1): 43-48.

103. Chen, J. (2005). "Canadian individual risks of radon-induced lung cancer for different exposure profiles." Canadian Journal of Public Health-Revue Canadienne De Sante Publique 96(5): 360-363.

ARTICLE DE SYNTHÈSE

104. Bochicchio, F. (2005). "Radon epidemiology and nuclear track detectors: Methods, results and perspectives." Radiation Measurements 40(2-6): 177-190.

- **COV**

105. Fiedler, N., R. Laumbach, et al. (2005). "Health effects of a mixture of indoor air volatile organics, their ozone oxidation products, and stress." Environmental Health Perspectives 113(11): 1542-1548.
106. Laumbach, R. J., N. Fiedler, et al. (2005). "Nasal effects of a mixture of volatile organic compounds and their ozone oxidation products." Journal of Occupational and Environmental Medicine 47(11): 1182-1189.
107. Ye, X. L., W. S. Yan, et al. (2005). "Cytogenetic analysis of nasal mucosa cells and lymphocytes from high-level long-term formaldehyde exposed workers and low-level short-term exposed waiters." Mutation Research-Genetic Toxicology and Environmental Mutagenesis 588(1): 22-27.

- **Biocontaminants**

108. Howden-Chapman, P., K. Saville-Smith, et al. (2005). "Risk factors for mold in housing: a national survey." Indoor Air 15(6): 469-476.
109. Thorne, P. S., K. Kulhankova, et al. (2005). "Endotoxin exposure is a risk factor for asthma - The National Survey of Endotoxin in United States Housing." American Journal of Respiratory and Critical Care Medicine 172(11): 1371-1377.
110. Stark, H. J., J. T. Randell, et al. (2005). "The effects of Aspergillus fumigatus challenge on exhaled and nasal NO levels." European Respiratory Journal 26(5): 887-893.
111. Walinder, R., L. Ernstgard, et al. (2005). "Acute effects of a fungus volatile compound." Environmental Health Perspectives 113(12): 1775-1778.
112. Calvo, M., E. Fernandez-Caldas, et al. (2005). "Mite allergen exposure, sensitisation and clinical symptoms in Valdivia, Chile." Journal of Investigational Allergology and Clinical Immunology 15(3): 189-196.
113. Piipari, R. and H. Keskinen (2005). "Agents causing occupational asthma in Finland in 1986-2002: Cow epithelium bypassed by moulds from moisture-damaged buildings." Clinical and Experimental Allergy 35(12): 1632-1637.

ARTICLE DE SYNTHÈSE

114. Laumbach, R. J. and H. M. Kipen (2005). "Bioaerosols and sick building syndrome: particles, inflammation, and allergy." Current Opinion in Allergy and Clinical Immunology 5(2): 135-139.

- **Particules**

115. Nerriere, E., D. Zmirou-Navier, et al. (2005). "Lung cancer risk assessment in relation with personal exposure to airborne particles in four French metropolitan areas." Journal of Occupational and Environmental Medicine 47(12): 1211-1217.
116. Vinzents, P. S., P. Moller, et al. (2005). "Personal exposure to ultrafine particles and oxidative DNA damage." Environmental Health Perspectives 113(11): 1485-1490.
117. Jansen, K. L., T. V. Larson, et al. (2005). "Associations between health effects and particulate matter and black carbon in subjects with respiratory disease." Environmental Health Perspectives 113(12): 1741-1746.

- **SBS**

118. Hutter, H.-P., H. Moshhammer, et al. (2006). "Health complaints and annoyances after moving into a new office building: A multidisciplinary approach including analysis of questionnaires, air and house dust samples." *International Journal of Hygiene and Environmental Health* 209(1): 65-68.
119. Nakazawa H. (2005). "A Case of Sick Building Syndrome in a Japanese Office Worker." *Industrial Health* 43(2): 341-345.

- **Fumée de tabac environnementale**

120. Topp, R., W. Thefeld, et al. (2005). "The effect of environmental tobacco smoke exposure on allergic sensitization and allergic rhinitis in adults." *Indoor Air* 15(4): 222-227.

III-3. Populations sensibles

- **Enfants**

121. Kim, J. L., L. Elfman, et al. (2005). "Current asthma and respiratory symptoms among pupils in relation to dietary factors and allergens in the school environment." *Indoor Air* 15(3): 170-182.
122. Eggleston, P. A., A. Butz, et al. (2005). "Home environmental intervention in inner-city asthma: a randomized controlled clinical trial." *Annals of Allergy Asthma & Immunology* 95(6): 518-524.
123. Chen, Z., L. Robison, et al. (2006). "Environmental exposure to residential pesticides, chemicals, dusts, fumes, and metals, and risk of childhood germ cell tumors." *International Journal of Hygiene and Environmental Health* 209(1): 31-40.
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