

OCCUPATIONAL ASTHMA CAUSING AGENTS :

List of Known Sensitizers*

Organic Chemicals

Acrylates

Methyl methacrylate, cyanoacrylates
Ethylcyanoacrylate ester
Plexiglass

Alcohols

Furfuryl alcohol (furan based resin)
Alkylaral polyether alcohol, polypropylene glycol (combination)

Aldehydes

Formaldehyde
Glutaraldehyde
Urea formaldehyde

Aliphatic Amines.: Ethyleneamines

Ethylene diamine
Hexamethylene tetramine
Triethylene tetramine

Aliphatic Amines: Ethanolamines

Monoethanolamine ..
Aminoethylethanolamine
Dimethylethanolamine

Anhydrides

Phthalic anhydride
Trimellitic anhydride
Tetrachlorophthalic anhydride
Pyromellitic dianhydride
Methyl tetrahydrophthalic anhydride
Himic anhydride

Amines, Aliphatic: Other

3-(Dimethylamino)-propylamine

Amines, Heterocyclic

Piperazine hydrochloride.
N-methylmorpholine

Amines: Other

Chloramine T

Aromatic Hydrocarbons, NOS

Styrene

Azo Compounds

Azodicarbonamide
Diazonium salt
Azobisformamide

Chlorinated Compounds

Chlorhexidine

Organic Chemicals, contd.

Fluorinated Compounds

Freon

Isocyanates

Toluene Diisocyanate
Diphenylmethane diisocyanate
1,5 Naphthylene diisocyanate
Isophorone diisocyanate
TDI, MDI, HDI, PPI (combination)
TDI, MDI, HDI (combination)
TDI, MDI (combination)

Phenols

Hexachlorophene

Polymers

Latex, synthetic
Polyvinyl chloride (fumes or powder)

Sulphonates

Iso-nonanyl oxybenzene sulphonate

Inorganic Chemicals

Metals

Aluminum
Chromium and Nickel (combination)
Cobalt and Nickel
Platinum
Nickel
Zinc fumes
Tungsten carbide
Chromium

Nonmetallic Elements

Fluorine

Miscellaneous Chemicals

Pharmaceuticals

Penicillins and Ampicillin
Penicillamine
Cephalosporins
Phenylglycine acid chloride
Psyllium
Methyl dopa
Spiramycin
Salbutamol intermediate
Amprolium

*Adapted from: Chan-Yeung M. Malo JL. Aetiological Agents in Occupational Asthma. European Respiratory Journal. 1994. Vol. 7. pp. 346-371.

**Miscellaneous Chemicals,
contd.**

Pharmaceuticals

Tetracycline
Isonicotinic acid hydrazide.

Hydralazine
Tylosin tartrate

Ipecacuanha
Cimetidine

Rose Hips

Dyes

Levafix brilliant yellow E36

Drimaren brilliant yellow K-3GL
Cibachrome brilliant scarlet 32

Drimaren brilliant blue K-BL

Persulphate salts and henna

Reactive dyes

Fluxes

Colophony

Zinc chloride, ammoniwn chloride
(mixture)

Alkylarul polyether alcohol,
polypropylene glycol (combination)
Pylene glycol

**Miscellaneous Chemicals,
NOS***

Tetraxzene
Oil mist

Biological Agents

Animal/Animal Materials

Laboratory animal
Egg protein (Egg producers)

Chicken

Pig

Frog

Lactoserum

Casein (cow's milk),

Bat guano

Fish/Fish Materials

Crab

Prawn

Hoya

Cuttle-fish

Trout

Shrimpmeal

Fish-feed, Echinodorus lava

Red soft coral

**Biological Agents,
contd.**

Insect/Insect Materials

Grain mite

Locust

Screw Worm Fly

Cricket

Bee moth

Moth

Butterfly

Mexican bean weevil

Fruit fly

Honeybee
L. Cazsar larvae

Lesser mealwonn,
(Grain and poultry workers)

Fowl mite, (poultry workers)

Barn mite, (Farmers)

Parasites, (Flour Handlers)

Mites, (Flour Handlers)

Acarian, (Apple Growers)

Daphnia, (Fish food store)

Weeping Fig, (plant Keepers)

Sheep Blowfly, (Technicians)

Larva of Silkworm

Plants/Plant Material

Grain dust
Wheat, Rye

Soya Flour

Lathyrus sativus

Vicia sativa

Buckwheat

Gluten

Coffee bean

Caster bean

Tea

Herbal Tea

Tobacco Leaf

Hops

Baby's Breath

Freesia

Paprika

Mushroom

Cacoon seed

Chicory

Sunflower

Garlic dust

Lycopodium

**Biological Agents,
contd.**

Plants/Plant Material

Sericin

Nacre dust

Henna

Vegetable Gums

Gum, Acacia

Gum, Tragacanth

Gum, Guar

Latex, natural rubber

Wood Dust or Bark

Western, red cedar, Thuja plicata)
California redwood,

(Sequoia sempervirens)

Cedar of Lebanon, (Cedra Libani)

Cocabolla, (Dalberqia retusa)

Iroko, (Chlorophora excelsa)

Oak, (Quercus robur)

Mahogany, (Shoreal Sp)

Abiruana, (Pouteria)

African Maple, (Triplochiton
scleroxylon)

Tanganyika aningre

Central American Walnut, (Juglans
olanchana)

Kejaat, (pterocarpus angolensis)

African zebrawood, (Microberlinia)

Ramin, (Gonystylus bancanus)

Quillaja bark

Fernambouc, (Caesalpinia echinata)

Ashwood, (Fraxinus americana)

Eastern red cedar, {Thuja occidentalis)

Ebony wood, (Disospyros crassiflora)

Kotibe wood, (Nesorgordonia

papverifera)

Cinnamon, (Cinnamomum Zeylanicum)

Biologic Enzymes

B.subtilis

Trypsin

Papain

Pepsin

Panceatin

Flaviastase

Bromelin

Fungal: amylase, amyloglucosidade

Fungal hemicellulase

Esperase