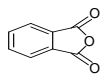
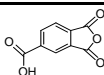
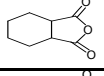
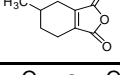
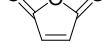
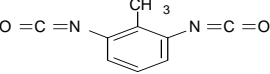
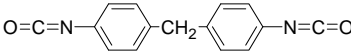
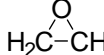



Chemical Allergens: Sensitivity to Low Molecular Weight Chemicals or Haptens

Individuals may be exposed to a variety of low molecular weight chemicals that may cause immunologic disease. Generally, the patient's exposure is related to their occupation but occasionally these chemicals are in the patient's home or school environment. Highly reactive low molecular chemicals can become allergenic when they combine with larger carrier proteins in the body to form hapten-protein conjugates. These serological tests are based on a measurement of the chemical coupled to human serum albumin. In theory, these hapten conjugates may induce any one of the Gell-Coombs types of hypersensitivities. However, the tests available are only useful in detecting those hypersensitivities involving specific IgE and/or IgG. It should be recognized that the presence of hapten-specific antibodies of either isotype is not necessarily indicative of hapten-related disease but only reflects exposure and subsequent immunologic sensitization. Asymptomatic individuals have been noted to have serum antibodies when exposed to these chemicals.

Test #	Chemical Name	Chemical Structure	Exposure
92410 (IgE) 92420 (IgG)	Phthalic Anhydride		Anhydrides find their widest applications in the plastics industry, including epoxy resins and in the production of various chemicals and dyes.
93010 (IgE) 93020 (IgG)	Trimellitic Anhydride		
93610 (IgE) 93620 (IgG)	Hexahydrophthalic Anhydride		
93710 (IgE) 93720 (IgG)	Methyltetrahydrophthalic Anhydride		
94210 (IgE) 94220 (IgG)	Maleic Anhydride		
92310 (IgE) 92320 (IgG)	Toluene Diisocyanate		Isocyanates are widely used in the production of polyurethane plastics, glues, wire coatings and paints
92710 (IgE) 92720 (IgG)	Methylene Diphenyl Diisocyanate		
92810 (IgE) 92820 (IgG)	Hexamethylene Diisocyanate	$O=C=N-(CH_2)_6-N=C=O$	
92510 (IgE) 92520 (IgG)	Ethylene Oxide		Used for the sterilization of heat-sensitive medical devices.
92610 (IgE) 92620 (IgG)	Formaldehyde		Used extensively as a raw material in the production of foam insulation, plywood, chipboard, textiles, paper, plastics, resins, paints, glues and cosmetics.

CPT Code:

IgE: 86003

IgG: 86001

Test Method: Pharmacia ImmunoCAP system (FEIA)

Reference Ranges: See Report

Units Reported: kU/L of IgE or mcg/mL of IgG

Specimen: 1 mL serum/plasma. Ship ambient temp.

For more information, contact
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