

## Vaccine Excipient & Media Summary, Part 2

### Excipients Included in U.S. Vaccines, by Vaccine

Includes vaccine ingredients (e.g., adjuvants and preservatives) as well as substances used during the manufacturing process, including vaccine-production media, that are removed from the final product and present only in trace quantities.  
In addition to the substances listed, most vaccines contain Sodium Chloride (table salt).

| Vaccine                  | Contains   |
|--------------------------|--|
| Anthrax (BioThrax)       | Aluminum Hydroxide, Amino Acids, Benzethonium Chloride, Formaldehyde or Formalin, Inorganic Salts and Sugars, Vitamins   |
| BCG (Tice)               | Asparagine, Citric Acid, Lactose, Glycerin, Iron Ammonium Citrate, Magnesium Sulfate, Potassium Phosphate  |
| DTaP (Daptacel)          | Aluminum Phosphate, Ammonium Sulfate, Casamino Acid, Dimethyl-beta-cyclodextrin, Formaldehyde or Formalin, Glutaraldehyde, 2-Phenoxyethanol  |
| DTaP (Infanrix)          | Aluminum Hydroxide, Bovine Extract, Formaldehyde or Formalin, Glutaraldehyde, 2-Phenoxyethanol, Polysorbate 80   |
| DTaP (Tripedia)          | Aluminum Potassium Sulfate, Ammonium Sulfate, Bovine Extract, Formaldehyde or Formalin, Gelatin, Polysorbate 80, Sodium Phosphate, Thimerosal*   |
| DTaP/Hib (TriHIBit)      | Aluminum Potassium Sulfate, Ammonium Sulfate, Bovine Extract, Formaldehyde or Formalin, Gelatin, Polysorbate 80, Sucrose, Thimerosal*  |
| DTaP/HepB/IPV (Pediarix) | Aluminum Hydroxide, Aluminum Phosphate, Bovine Protein, Lactalbumin Hydrolysate, Formaldehyde or Formalin, Glutaraldehyde, Monkey Kidney Tissue, Neomycin, 2-Phenoxyethanol, Polymyxin B, Polysorbate 80, Thimerosal*, Yeast Protein |
| DT (sanofi)              | Aluminum Potassium Sulfate, Bovine Extract, Formaldehyde or Formalin, Thimerosal (multi-dose) or Thimerosal* (single-dose)   |
| DT (Massachusetts)       | Aluminum Hydroxide, Formaldehyde or Formalin   |
| Hib (ACTHib)             | Ammonium Sulfate, Formaldehyde or Formalin, Sucrose  |
| Hib (PedvaxHib)          | Aluminum Hydroxyphosphate Sulfate  |
| Hib (HibTITER)           | Amino Acids, Ammonium Sulfate, Mineral Salts, Yeast Protein  |
| Hib/Hep B (Comvax)       | Amino Acids, Aluminum Hydroxyphosphate Sulfate, Dextrose, Formaldehyde or Formalin, Mineral Salts, Sodium Borate, Soy Peptone, Yeast Protein   |
| Hep A (Havrix)           | Aluminum Hydroxide, Amino Acids, Formaldehyde or Formalin, MRC-5 Cellular Protein, Neomycin Sulfate, 2-Phenoxyethanol, Phosphate Buffers, Polysorbate  |
| Hep A (Vaqta)            | Aluminum Hydroxyphosphate Sulfate, Bovine Albumin or Serum, DNA, Formaldehyde or Formalin, MRC-5 Cellular Protein, Sodium Borate   |
| Hep B (Engerix-B)        | Aluminum Hydroxide, Phosphate Buffers, Thimerosal*, Yeast Protein  |
| Hep B (Recombivax)       | Aluminum Hydroxyphosphate Sulfate, Amino Acids, Dextrose, Formaldehyde or Formalin, Mineral Salts, Potassium Aluminum Sulfate, Soy Peptone, Yeast Protein  |

| <b>Vaccine</b>                        | <b>Contains</b>  |
|---------------------------------------|--|
| HepA/HepB (Twinrix)                   | Aluminum Hydroxide, Aluminum Phosphate, Amino Acids, Dextrose, Formaldehyde or Formalin, Inorganic Salts, MRC-5 Cellular Protein, Neomycin Sulfate, 2-Phenoxyethanol, Phosphate Buffers, Polysorbate 20, Thimerosal*, Vitamins, Yeast Protein                    |
| Human Papillomavirus (HPV) (Gardasil) | Amino Acids, Amorphous Aluminum Hydroxyphosphate Sulfate, Carbohydrates, L-histidine, Mineral Salts, Polysorbate 80, Sodium Borate, Vitamins   |
| Influenza (Fluarix)                   | Egg Albumin (Ovalbumin), Egg Protein, Formaldehyde or Formalin, Gentamicin, Hydrocortisone, Octoxynol-10, $\alpha$ -Tocopheryl Hydrogen Succinate, Polysorbate 80, Sodium Deoxycholate, Sodium Phosphate, Thimerosal*  |
| Influenza (Flulaval)                  | Egg Albumin (Ovalbumin), Egg Protein, Formaldehyde or Formalin, Sodium Deoxycholate, Phosphate Buffers, Thimerosal   |
| Influenza (Fluvirin)                  | Beta-Propiolactone, Egg Protein, Neomycin, Polymyxin B, Polyoxyethylene 9-10 Nonyl Phenol (Triton N-101, Octoxynol 9), Thimerosal (multidose containers), Thimerosal* (single-dose syringes)   |
| Influenza (Fluzone)                   | Egg Protein, Formaldehyde or Formalin, Gelatin, Octoxinol-9 (Triton X-100), Thimerosal (multidose containers)  |
| Influenza (FluMist)                   | Chick Kidney Cells, Egg Protein, Gentamicin Sulfate, Monosodium Glutamate, Sucrose Phosphate Glutamate Buffer  |
| IPV (Ipol)                            | Calf Serum Protein, Formaldehyde or Formalin, Monkey Kidney Tissue, Neomycin, 2-Phenoxyethanol, Polymyxin B, Streptomycin,   |
| Japanese Encephalitis (JE-Vax)        | Formaldehyde or Formalin, Gelatin, Mouse Serum Protein, Polysorbate 80, Thimerosal   |
| Measles (Attenuvax)                   | Amino Acid, Bovine Albumin or Serum, Chick Embryo Fibroblasts, Gelatin, Glutamate, Human Albumin, Neomycin, Phosphate, Sodium Phosphate, Sorbitol, Sucrose, Vitamins   |
| Meningococcal (Menactra)              | Formaldehyde or Formalin, Phosphate Buffers  |
| Meningococcal (Menomune)              | Lactose, Thimerosal (10-dose vials only)   |
| Mumps (Mumpsvax)                      | Amino Acid, Bovine Albumin or Serum, Chick Embryo Fibroblasts, Human Serum Albumin, Gelatin, Glutamate, Neomycin, Phosphate Buffers, Sorbitol, Sucrose, Vitamins   |
| MMR (MMR-II)                          | Amino Acid, Bovine Albumin or Serum, Chick Embryo Fibroblasts, Human Serum Albumin, Gelatin, Glutamate, Neomycin, Phosphate Buffers, Sorbitol, Sucrose, Vitamins   |
| MMRV (ProQuad)                        | Bovine Albumin or Serum, Gelatin, Human Serum Albumin, Monosodium L-glutamate, MRC-5 Cellular Protein, Neomycin, Sodium Phosphate Dibasic, Sodium Bicarbonate, Sorbitol, Sucrose, Potassium Phosphate Monobasic, Potassium Chloride, Potassium Phosphate Dibasic |
| Pneumococcal (Pneumovax)              | Bovine Protein, Phenol   |
| Pneumococcal (Prevnar)                | Aluminum Phosphate, Amino Acid, Soy Peptone, Yeast Extract   |
| Rabies (Biorab)                       | Aluminum Phosphate, Phosphate Buffers, Rhesus Fetal Lung Tissue, Thimerosal  |

| <b>Vaccine</b>                    | <b>Contains</b>  |
|-----------------------------------|--|
| Rabies (Imovax)                   | Human Serum Albumin, Beta-Propiolactone, MRC-5 Cellular Protein, Neomycin, Phenol Red (Phenolsulfonphthalein), Vitamins  |
| Rabies (RabAvert)                 | Amphotericin B, Beta-Propiolactone, Bovine Albumin or Serum, Chicken Protein, Chlortetracycline, Egg Albumin (Ovalbumin), Ethylenediamine-Tetraacetic Acid Sodium (EDTA), Neomycin, Potassium Glutamate                                    |
| Rotavirus (RotaTeq)               | Cell Culture Media, Fetal Bovine Serum, Sodium Citrate, Sodium Phosphate Monobasic Monohydrate, Sodium Hydroxide Sucrose, Polysorbate 80   |
| Rubella (Meruvax II)              | Bovine Albumin or Serum, Gelatin, Human Serum Albumin, Neomycin, Phosphate Buffers, Sodium Phosphate, Sorbitol   |
| Td (Decavac)                      | Aluminum Potassium Sulfate, Bovine Extract, Formaldehyde or Formalin, 2-Phenoxyethanol, Peptone, Thimerosal*   |
| Td (Massachusetts)                | Aluminum Hydroxide, Aluminum Phosphate, Formaldehyde or Formalin, Thimerosal (some multidose containers)   |
| Tdap (Adacel)                     | Aluminum Phosphate, Formaldehyde or Formalin, Glutaraldehyde, 2-Phenoxyethanol   |
| Tdap (Boostrix)                   | Aluminum Hydroxide, Bovine Extract, Formaldehyde or Formalin, Glutaraldehyde, Polysorbate 80   |
| Typhoid (inactivated – Typhim Vi) | Disodium Phosphate, Monosodium Phosphate, Phenol, Polydimethylsiloxane, Hexadecyltrimethylammonium Bromide   |
| Typhoid (oral – Ty21a)            | Amino Acids, Ascorbic Acid, Bovine Protein, Casein, Dextrose, Galactose, Gelatin, Lactose, Magnesium Stearate, Sucrose, Yeast Extract  |
| Vaccinia (DryVax)                 | Bovine Albumin or Serum, Brilliant Green (historic), Chlortetracycline Hydrochloride, Dihydrostreptomycin Sulfate, Glycerin, Neomycin, Phenol, Polymyxin B   |
| Varicella (Varivax)               | Bovine Albumin or Serum, Ethylenediamine-Tetraacetic Acid Sodium (EDTA), Gelatin, Monosodium L-Glutamate, MRC-5 DNA and Cellular Protein, Neomycin, Potassium Chloride, Potassium Phosphate Monobasic, Sodium Phosphate Monobasic, Sucrose |
| Yellow Fever (YF-Vax)             | Egg Protein, Gelatin, Sorbitol   |
| Zoster (Zostavax)                 | Bovine Calf Serum, Hydrolyzed Porcine Gelatin, Monosodium L-glutamate, MRC-5 DNA and Cellular Protein, Neomycin, Potassium Phosphate Monobasic, Potassium Chloride, Sodium Phosphate Dibasic, Sucrose                                      |

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\*Where “thimerosal” is marked with an asterisk (\*) it indicates that the product should be considered equivalent to thimerosal-free products. This vaccine may contain trace amounts (<3 mcg) of mercury left after post-production thimerosal removal, but these amounts have no biological effect. *JAMA* 1999;282(18) and *JAMA* 2000;283(16)

Adapted from Grabenstein JD. *ImmunoFacts: Vaccines & Immunologic Drugs*. St. Louis, MO: Wolters Kluwer Health Inc.; 2006 and individual products’ package inserts.

All reasonable efforts have been made to ensure the accuracy of this information, but manufacturers may change product contents before that information is reflected here.