

Vaccine Excipients

updated September 2016

Excipient	Type	Vaccine Name	Vaccine Type	Amount per dose
2-Phenoxyethanol	Stabilizer	Adacel	Tdap	3.3 mg (0.6% v/v) (not as a preservative)
2-Phenoxyethanol	Stabilizer	Daptacel	DTaP	3.3 mg (0.6% v/v) (not as a preservative)
2-Phenoxyethanol	Preservative	IPOL	Polio	0.5% (as a preservative)
2-Phenoxyethanol	Stabilizer	Pentacel	DTaP+IPV+Hib	3.3 mg (0.6 v/v) (not as a preservative)
2-Phenoxyethanol	Stabilizer	Quadracel	DTaP+IPV	3.3 mg (0.6 v/v) (not as a preservative)
3-O-desacyl-4'-monophosphoryl lipid A (MPL)	Adjuvant	Cervarix	HPV	50 mcg
Albumin, Bovine	Stabilizer	Ixiaro	Japanese Encephalitis	≤ 100 ng/mL
Albumin, Bovine	Stabilizer	Quadracel	DTaP+IPV	≤ 50 ng
Albumin, Bovine	Stabilizer	Vaqta	HepA	< 0.1 ng
Albumin, Calf Serum	Stabilizer	Kinrix	DTaP+IPV	VERO cell culture growth
Albumin, Calf Serum	Stabilizer	Zostavax	Zoster	Trace amounts
Albumin, Calf Serum Protein	Stabilizer	IPOL	IPV	< 1 ppm50 ng
Albumin, Calf Serum Protein	Stabilizer	Pediarix	DTaP+HepB+IPV	VERO cell culture growth≤ 50 ng residual
Albumin, Calf Serum Protein	Stabilizer	Pentacel	DTaP+IPV+Hib	≤ 50 ng residual
Albumin, Egg (Ovalbumin)	Residual Medium	Afluria	Influenza	≤ 1 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	Fluarix Quad	Influenza	≤ 0.05 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	Flulaval Quad	Influenza	≤ 0.3 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	FluMist Quad	Influenza	≤ 0.24 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	Fluvirin	Influenza	≤ 1 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	FluZone	Influenza	Limited quantity
Albumin, Egg (Ovalbumin)	Residual Medium	RabAvert	Rabies	< 3 ng/dose
Albumin, Fetal Bovine Serum	Stabilizer	MMR-II	MMR	< 1 ppm
Albumin, Fetal Bovine Serum	Stabilizer	RotaTeq	Rotavirus	Trace amounts
Albumin, Fetal Bovine Serum	Stabilizer	Varivax	Varicella	Trace amounts
Albumin, Human	Stabilizer	Imovax	Rabies	< 100 mg
Albumin, Human Serum	Diluent/Stabilizer	MMR-II	MMR	≤ 0.3 mg
Albumin, Human Serum	Diluent/Stabilizer	ProQuad	MMRV	0.31 mg
Albumin, Human Serum	Diluent/Stabilizer	RabAvert	Rabies	< 0.3 mg
Aluminum	Adjuvant	Adacel	Tdap	0.33 mg
Aluminum	Adjuvant	Bexsero	Meningococcal Group B	1.5 mg aluminum hydroxide
Aluminum	Adjuvant	BioThrax	Anthrax	1.2 mg/mL
Aluminum	Adjuvant	Boostrix	Tdap	≤ 0.39 mg
Aluminum	Adjuvant	Cervarix	HPV	0.5 mg aluminum hydroxide
Aluminum	Adjuvant	Comvax	Hib+HepB	225 mcg
Aluminum	Adjuvant	Daptacel	DTaP	0.33 mg
Aluminum	Adjuvant	DT	DT	≤ 0.17 mg
Aluminum	Adjuvant	Engerix-B	HepB	0.5 mg/mL as aluminum hydroxide
Aluminum	Adjuvant	Gardasil	HPV 9-valent	225 mcg
Aluminum	Adjuvant	Gardasil 9	HPV	500 mcg
Aluminum	Adjuvant	Infanrix	DTaP	≤ 0.625 mg
Aluminum	Adjuvant	Ixiaro	Japanese Encephalitis	250 mcg aluminum hydroxide
Aluminum	Adjuvant	Kinrix	DTaP+IPV	≤ 0.6 mg
Aluminum	Adjuvant	Pediarix	DTaP+HepB+IPV	≤ 0.85 mg
Aluminum	Adjuvant	PedvaxHIB	Hib+HepB	225 mcg
Aluminum	Adjuvant	Pentacel	DTaP+IPV+Hib	0.33 mg
Aluminum	Adjuvant	Prenar	Pneumococcal 7-valent	0.125 mg
Aluminum	Adjuvant	Prenar 13	Pneumococcal 13-valent	0.125 mg
Aluminum	Adjuvant	Quadracel	DTaP+IPV	0.33 mg
Aluminum	Adjuvant	Recombivax HB	HepB	0.5 mg/mL
Aluminum	Adjuvant	Td	Td	≤ 0.53 mg
Aluminum	Adjuvant	Tenivac	Td	0.33 mg
Aluminum	Adjuvant	Tetanus and Diphtheria Toxoids	TT	≤ 0.25
Aluminum	Adjuvant	Twinrix	HepA+HepB	0.45 mg
Aluminum	Adjuvant	Vaqta	HepA	0.45 mg
Aluminum	Adjuvant	Trumenba	Meningococcal Group B	0.25 mg
Amino Acid	Medium Nutrient	BioThrax	Anthrax	Unspecified amount in growth medium
Amino Acid	Medium Nutrient	Cervarix	HPV	Unspecified amount in growth medium
Amino Acid	Medium Nutrient	Comvax	Hib+HepB	Unspecified amount in growth medium
Amino Acid	Medium Nutrient	Flublok	Influenza	Ingredient in growth medium
Amino Acid	Medium Nutrient	Gardasil	HPV	Ingredient in growth medium
Amino Acid	Medium Nutrient	Menveo	Meningococcal	In growth medium
Amino Acid	Medium Nutrient	MMR-II	MMR	In growth medium
Amino Acid	Medium Nutrient	PedvaxHIB	Hib+HepB	Amount not specified in Package Insert

Amino Acid	Medium Nutrient	Recombivax HB	HepB	In fermentation medium
Amino Acid	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Amino Acid	Medium Nutrient	Twinrix	HepA+HepB	Amount not specified in Package Insert
Amino Acid	Medium Nutrient	Vivotif	Typhoid	1.4-7 mg/capsule
Ammonium Sulfate	Protein Purifier	ActHIB	Hib	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Adacel	Tdap	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Daptacel	DTaP	Ingredient in purification
Ammonium Sulfate	Protein Purifier	DT	DT	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Menactra	Meningococcal	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Pentacel	DTaP+IPV+Hib	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Prevnar	Pneumococcal 7-valent	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Prevnar 13	Pneumococcal 13-valent	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Td	Td	Ingredient in purification
Ammonium Sulfate	Protein Purifier	Tenivac	Td	Ingredient in purification
Amphotericin B	Antimicrobial	RabAvert	Rabies	< 2 ng
Ascorbic Acid	Anitoxidant	Vivotif	Typhoid	1-5 mg/capsule
Barium		Fluad	Influenza	<0.5 mcg
Benzethonium Chloride	Preservative	BioThrax	Anthrax	25 mcg/mL
Beta-Propiolactone	Viral Inactivator	Afluria	Influenza	< 2 ng
Beta-Propiolactone	Viral Inactivator	Flucelvax Quad	Influenza	≤ 0.5 mcg
Beta-Propiolactone	Viral Inactivator	Fluvirin	Influenza	≤ 0.5 mcg
Beta-Propiolactone	Viral Inactivator	Imovax	Rabies	< 50 ppm
Bovine Casein	Medium Nutrient	Boostrix	Tdap	Amount not specified in Package Insert
Bovine Casein	Medium Nutrient	Infanrix	DTaP	12.2-18.3 ng/mL
Bovine Casein	Medium Nutrient	Kinrix	DTaP+IPV	Ingredient in Latham medium
Bovine Casein	Medium Nutrient	Pediarix	DTaP+HepB+IPV	Ingredient of Latham medium
Bovine Casein	Medium Nutrient	Vivotif	Typhoid	Ingredient in medium
Bovine Extract	Medium Nutrient	Boostrix	Tdap	Amount not specified in Package Insert
Bovine Extract	Medium Nutrient	DT	DT	Amount not specified in Package Insert
Bovine Extract	Stabilizer	Infanrix	DTaP	Ingredient in Fenton medium
Bovine Extract	Stabilizer	Kinrix	DTaP+IPV	Ingredient in Fenton medium
Bovine Extract	Stabilizer	Pediarix	DTaP+HepB+IPV	Ingredient of Fenton medium
Bovine Extract	Stabilizer	Td	Td	Ingredient in Mueller's media
Bovine, Casamino Acid	Stabilizer	Adacel	Tdap	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Daptacel	DTaP	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Menomune	Meningococcal	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Pentacel	DTaP+IPV+Hib	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Prevnar	Pneumococcal 7-valent	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Prevnar 13	Pneumococcal 13-valent	Ingredient in growth medium
Bovine, Casamino Acid	Stabilizer	Tenivac	Td	Ingredient in growth medium
Calcium Carbonate	Buffer	Rotarix	Rotavirus	Ingredient in diluent
Calcium Chloride	Medium Nutrient	Afluria	Influenza	1.5 mcg
Calcium Chloride	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Carbohydrates	Medium Nutrient	Gardasil	HPV	Ingredient in fermentation medium
Chick Embryo	Residual Medium	MMR-II	MMR	No intact cells (may have trace residual protein)
Chick Embryo	Residual Medium	ProQuad	MMRV	No intact cells (may have trace residual protein)
Chick fibroblasts	Protein Purifier	RabAvert	Rabies	Growth medium
Chlortetracycline	Antimicrobial	RabAvert	Rabies	1 mcg
Citric Acid Monohydrate		Fluad	Influenza	0.04 mg
CTAB	Protein Purifier	Fluad	Influenza	≤12 mcg
CTAB	Protein Purifier	Flucelvax Quad	Influenza	≤ 13.5 mcg
Dextrose	Medium Nutrient	Comvax	Hib+HepB	Amount not specified in Package Insert
Dextrose	Medium Nutrient	Recombivax HB	HepB	Ingredient of fermentation medium
Dextrose	Medium Nutrient	Vivotif	Typhoid	Ingredient in medium
D-glucose	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Dimethyl-beta-cyclodextrin	Medium Nutrient	Adacel	Tdap	Amount not specified in Package Insert
Dimethyl-beta-cyclodextrin	Medium Nutrient	Daptacel	DTaP	Amount not specified in Package Insert
Dimethyl-beta-cyclodextrin	Medium Nutrient	Pentacel	DTaP+IPV+Hib	Ingredient of Stainer-Scholte medium
DNA	Residual Medium	Flublok	Influenza	≤ 10 ng
DNA	Residual Medium	Flucelvax Quad	Influenza	≤ 10 ng MDCK cell
DNA	Residual Medium	Ixiaro	Japanese Encephalitis	≤ 200 pg/mL ('host cell DNA')
DNA	Residual Medium	ProQuad	MMRV	Residual component of MRC-5 cells
DNA	Residual Medium	RotaTeq	Rotavirus	
DNA	Residual Medium	Vaqta	HepA	< 4 x 10 ⁻⁶ mcg
DNA	Residual Medium	Varivax	Varicella	Residual component of MRC-5 cells
DNA	Residual Medium	Zostavax	Zoster	Residual component of MRC-5 cells
EDTA	Preservative	FluMist Quad	Influenza	<0.37 mcg

EDTA	Preservative	RabAvert	Rabies	0.3 mg sodium EDTA
EDTA	Preservative	Varivax	Varicella	Trace amounts
Egg Protein	Residual Medium	Fluad	Influenza	<0.4 mcg
Egg Protein	Residual Medium	Fluvirin	Influenza	≤ 1 mcg ovalbumin
Ferric (III) Nitrate	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Formaldehyde	Inactivating Agent	ActHIB	Hib	< 0.5 mcg
Formaldehyde	Inactivating Agent	Adacel	Tdap	≤ 5 mcg
Formaldehyde	Preservative	BioThrax	Anthrax	100 mg/mL
Formaldehyde	Inactivating Agent	Boostrix	Tdap	≤ 100 mcg (residual)
Formaldehyde	Inactivating Agent	Comvax	Hib+HepB	≤ 0.0004% (w/v) residual
Formaldehyde	Inactivating Agent	Daptacel	DTaP	≤ 5 mcg (residual)
Formaldehyde	Inactivating Agent	DT	DT	< 0.02%
Formaldehyde	Inactivating Agent	Fluad	Influenza	≤10 mcg
Formaldehyde	Inactivating Agent	Fluarix Quad	Influenza	≤ 5 mcg
Formaldehyde	Inactivating Agent	Flulaval Quad	Influenza	≤ 25 mcg
Formaldehyde	Inactivating Agent	FluZone	Influenza	≤ 100 mcg/.5mL
Formaldehyde	Inactivating Agent	FluZone High-Dose	Influenza	≤ 100 mcg
Formaldehyde	Inactivating Agent	FluZone Intradermal Quad	Influenza	≤ 20 mcg
Formaldehyde	Inactivating Agent	FluZone Quad	Influenza	≤ 100 mcg/0.5mL in Fluzone Intradermal
Formaldehyde	Inactivating Agent	Hiberix	Hib	< 0.5 mcg (residual)
Formaldehyde	Inactivating Agent	Infanrix	DTaP	≤ 100 mcg (residual)
Formaldehyde	Inactivating Agent	IPOL	Polio	≤ 0.02%
Formaldehyde	Inactivating Agent	Ixiaro	Japanese Encephalitis	≤ 200 pmm
Formaldehyde	Inactivating Agent	JE-Vax	Japanese Encephalitis	< 100 mcg
Formaldehyde	Inactivating Agent	Kinrix	DTaP+IPV	≤ 100 mcg (residual)
Formaldehyde	Inactivating Agent	Menactra	Meningococcal	< 2.66 mcg
Formaldehyde	Inactivating Agent	Menhibrix	Meningococcal CY+Hib	≤ 0.72 mcg
Formaldehyde	Inactivating Agent	Menveo	Meningococcal	≤ 0.3 mcg
Formaldehyde	Inactivating Agent	Pediarix	DTaP+HepB+IPV	≤ 100 mcg (residual)
Formaldehyde	Inactivating Agent	Pentacel	DTaP+IPV+Hib	≤ 5 mcg (residual)
Formaldehyde	Inactivating Agent	Quadracel	DTaP+IPV	≤ 5 mcg
Formaldehyde	Inactivating Agent	Recombivax HB	HepB	< 15 mcg/mL (residual)
Formaldehyde	Inactivating Agent	Td	Td	100 mcg
Formaldehyde	Inactivating Agent	Tenivac	Td	≤ 5 mcg (residual)
Formaldehyde	Inactivating Agent	Tetanus and Diphtheria Toxoids	Td	≤ 0.02% (residual)
Formaldehyde	Inactivating Agent	Twinrix	HepA+HepB	≤ 0.1 mg formalin
Formaldehyde	Inactivating Agent	Vaqta	HepA	< 0.8 mcg
Galactose	Medium Nutrient	Vivotif	Typhoid	Ingredient in medium
Gelatin	Stabilizer	FluZone	Influenza	0.05% in 0.25 mL and 0.5 mL
Gelatin	Manufacturing residue	JE-Vax	Japanese Encephalitis	500 mcg/1 mL dose
Gelatin	Gelatin Capsules	Vivotif	Typhoid	Gelatin capsules
Gelatin	Stabilizer	YF-Vax	Yellow Fever	Amount not specified in Package Insert
Gelatin, Bovine	Stabilizer, solvent	RabAvert	Rabies	< 12 mg polygeline
Gelatin, hydrolyzed	Stabilizer	MMR-II	MMR	14.5 mg
Gelatin, hydrolyzed	Stabilizer	ProQuad	MMRV	11 mg
Gelatin, hydrolyzed	Stabilizer	Varivax	Varicella	12.5 mg
Gelatin, Porcine, Hydrolyzed	Stabilizer	FluMist Quad	Influenza	2.00 mg/0.2 mLdose
Gelatin, Porcine, Hydrolyzed	Stabilizer	Zostavax	Varicella Zoster	15.58 mg
Gentamicin Sulfate	Antimicrobial	Fluarix Quad	Influenza	≤ 0.15 mcg
Gentamicin Sulfate	Antimicrobial	FluMist Quad	Influenza	< 0.015 mcg/mL
Glutamate	Medium Nutrient	MMR-II	MMR	Ingredient in growth medium (Medium 199)
Glutaraldehyde	Inactivating Agent	Adacel	Tdap	< 50 ng (residual)
Glutaraldehyde	Inactivating Agent	Boostrix	Tdap	Amount not specified in Package Insert
Glutaraldehyde	Inactivating Agent	Daptacel	DTaP	< 50 ng (residual)
Glutaraldehyde	Inactivating Agent	Infanrix	DTaP	Amount not specified in Package Insert
Glutaraldehyde	Inactivating Agent	Kinrix	DTaP+IPV	Amount not specified in Package Insert
Glutaraldehyde	Inactivating Agent	Pediarix	DTaP+HepB+IPV	Amount not specified in Package Insert
Glutaraldehyde	Inactivating Agent	Pentacel	DTaP+IPV+Hib	< 50 ng (residual)
Glutaraldehyde	Inactivating Agent	Quadracel	DTaP+IPV	< 50 ng
Hexadecyltrimethylammonium Bromide	Protein Purifier	Typhim Vi	Typhoid	Amount not specified in Package Insert
Histidine	Medium Nutrient	Bexsero	Meningococcal Group B	0.776 mg
Histidine	Medium Nutrient	Trumenba	Meningococcal Group B	10 mM
Hydrocortisone	Medium Nutrient	Fluarix Quad	Influenza	≤ 0.0016 mcg
Insect cell	Residual medium	Cervarix	HPV	≤ 40 ng (residual)
Kanamycin		Fluad	Influenza	≤ 0.03 mcg

Lactalbumin Hydrolysate	Medium Nutrient	Kinrix	DTaP+IPV	Ingredient in growth medium
Lactalbumin Hydrolysate	Medium Nutrient	Pediarix	DTaP+HepB+IPV	Ingredient in growth medium
Lactose	Stabilizer	Hiberix	Hib	12.6 mg
Lactose	Stabilizer	Menomune	Meningococcal	2.5-5 mg
Lactose	Stabilizer	Vivotif	Typhoid	100-180 mg/capsule
L-cystine	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in Package Insert
L-histidine	Medium Nutrient	Gardasil	HPV	0.78 mg
L-histidine	Medium Nutrient	Gardasil 9	HPV	0.78 mg
L-tyrosine	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in Package Insert
Magnesium Stearate	Lubricant for capsule filling	Vivotif	Typhoid	3.6-4.4 mg/capsule
Magnesium Sulfate	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in Package Insert
Monosodium glutamate	Stabilizer	FluMist Quad	Influenza	0.188 mg/0.2 mL dose
Monosodium L-glutamate	Stabilizer	ProQuad	MMRV	0.40 mg
Monosodium L-glutamate	Stabilizer	Varivax	Varicella	0.5 mg
Monosodium L-glutamate	Stabilizer	Zostavax	Varicella Zoster	0.62 mg
Mouse Serum Protein	Manufacturing residue	JE-Vax	Japanese Encephalitis	< 50 ng
MRC-5	Manf residue	Imovax	Rabies	Amount not specified in Package Insert
MRC-5	Growth Medium	Pentacel	DTaP+IPV+Hib	Amount not specified in Package Insert
MRC-5	Manf residue	ProQuad	MMRV	Residual
MRC-5	Manf residue	Twinrix	HepA+HepB	≤2.5 mcg
MRC-5	Manf residue	Vaqta	HepA	Amount not specified in Package Insert
MRC-5	Manf residue	Varivax	Varicella	Residual components
MRC-5	Manf residue	Zostavax	Varicella Zoster	Residual
Neomycin	Antimicrobial	Fluad	Influenza	≤ 0.02 mcg
Neomycin	Antimicrobial	Fluvirin	Influenza	≤2.5 mcg
Neomycin	Antimicrobial	IPOL	IPV	< 5 ng
Neomycin	Antimicrobial	Kinrix	DTaP+IPV	≤ 0.05 ng
Neomycin	Antimicrobial	MMR-II	MMR	25 mcg
Neomycin	Antimicrobial	Pediarix	DTaP+HepB+IPV	≤ 0.05 ng
Neomycin	Antimicrobial	Pentacel	DTaP+IPV+Hib	< 4 pg
Neomycin	Antimicrobial	ProQuad	MMRV	< 16 mcg
Neomycin	Antimicrobial	Quadracel	DTaP+IPV	< 4 pg
Neomycin	Antimicrobial	RabAvert	Rabies	<1 mcg
Neomycin	Antimicrobial	Vaqta	HepA	<10 ppb (residual)
Neomycin	Antimicrobial	Varivax	Varicella	Trace amounts
Neomycin	Antimicrobial	Zostavax	Varicella Zoster	Trace amounts
Neomycin Sulfate	Antimicrobial	Afluria	Influenza	≤3 ng
Neomycin Sulfate	Antimicrobial	Imovax	Rabies	<150 mcg
Neomycin Sulfate	Antimicrobial	Twinrix	HepA+HepB	≤ 20 ng
Nonylphenol Ethoxylate	Surfactant	Fluvirin	Influenza	≤0.015% w/v
Octoxynol-10 (Triton X-100)	Surfactant	Fluarix Quad	Influenza	≤ 0.115 mg
Octoxynol-10 (Triton X-100)	Surfactant	Flublok	Influenza	≤ 100 mcg
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone	Influenza	≤ 150 mcg/0.5mL
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone High-Dose	Influenza	≤250 mcg
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone Intradermal Quad	Influenza	≤50 mcg
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone Quad	Influenza	≤250 mcg/0.5mL
Peptone	Medium Nutrient	DT	TD	Amount not specified in Package Insert
Peptone, Soy	Medium Nutrient	Comvax	Hib+HepB	Amount not specified in Package Insert
Peptone, Soy	Medium Nutrient	Prevnar	Pneumococcal 7-valent	Growth medium
Peptone, Soy	Medium Nutrient	Prevnar 13	Pneumococcal 13-valent	Growth medium
Peptone, Soy	Medium Nutrient	Recombivax HB	HepB	Ingredient of fermentation medium
Peptone, Soy	Medium Nutrient	Tetanus Toxoid	TT	Ingredient of fermentation medium
Phenol	Preservative, antibacterial	Comvax	Hib+HepB	Ingredient in purification procedure
Phenol	Preservative, antibacterial	PedvaxHIB	Hib+HepB	Ingredient in purification procedure
Phenol	Preservative	Pneumovax 23	Pneumococcal 23-valent	Saline containing 0.25% phenol
Phenol	Preservative, antibacterial	Typhim Vi	Typhoid	0.25%
Phenol Red Indicator	pH indicator, dye	Imovax	Rabies	20 mcg
Phenol Red Indicator	pH indicator, dye	Rotarix	Rotavirus	Ingredient of Growth Medium
Phosphate Buffer	Buffer	Afluria	Influenza	20 mcg monobasic potassium phosphate 80 mcg monobasic sodium phosphate 300 mcg diabolic sodium phosphate

Phosphate Buffer	Buffer	Cervarix	HPV	0.624 mg sodium dihydrogen phosphate dihydrate
Phosphate Buffer	Buffer	Engerix-B	HepB	0.98 mg/mL disodium phosphate dihydrate 0.71 mg/mL sodium dihydrogen phosphate dihydrate
Phosphate Buffer	Buffer	Flublok	Influenza	0.195 mcg monobasic sodium phosphate 1.3 mg dibasic sodium phosphate
Phosphate Buffer	Buffer	FluMist Quad	Influenza	0.96 mg/0.2 mL dose monobasic potassium phosphate 2.26 mg/dose dibasic potassium phosphate
Phosphate Buffer	Buffer	FluZone High-Dose	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Phosphate Buffer	Buffer	FluZone Intradermal Quad	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Phosphate Buffer	Buffer	FluZone Quad	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Phosphate Buffer	Buffer	FluZone Quad	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Phosphate Buffer	Buffer	Ixiaro	Japanese Encephalitis	potassium dihydrogen phosphate 0.5 mL phosphate buffered saline
Phosphate Buffer	Buffer	Menactra	Meningococcal	Amount not specified in Package Insert
Phosphate Buffer	Buffer	MMR-II	MMR	Sodium phosphate, amount not specified
Phosphate Buffer	Buffer	ProQuad	MMRV	36 mcg potassium phosphate dibasic 72 mcg potassium phosphate monobasic 0.34 mg sodium phosphate dibasic
Phosphate Buffer	Buffer	Rotarix	Rotavirus	Sodium phosphate in DMEM (medium)
Phosphate Buffer	Buffer	RotaTeq	Rotavirus	Sodium phosphate monobasic monohydrate
Phosphate Buffer	Buffer	Twinrix	HepA+HepB	Amount not specified in Package Insert
Phosphate Buffer	Buffer	Typhim Vi	Typhoid	0.065 mg disodium phosphate 0.023 mg monosodium phosphate
Phosphate Buffer	Buffer	Varivax	Varicella	0.08 mg potassium phosphate monobasic 0.45 mg sodium phosphate dibasic Sodium phosphate monobasic, trace amounts
Phosphate Buffer	Buffer	Zostavax	Varicella Zoster	0.10 mg potassium phosphate monobasic 0.57 mg sodium phosphate monobasic
Polymyxin	Antimicrobial	Fluvirin	Influenza	≤3.75 mcg
Polymyxin B	Antimicrobial	Afluria	Influenza	≤ 0.5 ng
Polymyxin B	Antimicrobial	IPOL	Polio	25 ng
Polymyxin B	Antimicrobial	Kinrix	DTaP+IPV	≤ 0.01 ng
Polymyxin B	Antimicrobial	Pediarix	DTaP+HepB+IPV	≤ 0.01 ng
Polymyxin B	Antimicrobial	Pentacel	DTaP+IPV+Hib	< 4 pg
Polymyxin B sulfate	Antimicrobial	Quadracel	DTaP+IPV	< 4 pg
Polysorbate 20	Surfactant	Flublok	Influenza	≤ 27.5 mcg (Tween 20)
Polysorbate 20	Surfactant	Havrix	HepA	0.05 mg/mL
Polysorbate 20	Surfactant	Twinrix	HepA+HepB	Amount not specified in Package Insert
Polysorbate 80	Surfactant	Boostrix	Tdap	≤ 100 mcg (Tween 80)
Polysorbate 80	Surfactant	Fluad	Influenza	1.175 mg
Polysorbate 80	Surfactant	Fluarix Quad	Influenza	≤ 0.550 mg (Tween 80)
Polysorbate 80	Surfactant	Flucelvax Quad	Influenza	≤1125 mcg (Tween 80)
Polysorbate 80	Surfactant	Flulaval Quad	Influenza	≤887 mcg
Polysorbate 80	Surfactant	Gardasil	HPV	50 mcg
Polysorbate 80	Surfactant	Gardasil 9	HPV	50 mcg
Polysorbate 80	Surfactant	Infanrix	DTaP	≤ 100 mcg (Tween 80)
Polysorbate 80	Surfactant	JE-Vax	Japanese Encephalitis	< 0.0007%
Polysorbate 80	Surfactant	Kinrix	DTaP+IPV	≤ 100 mcg (Tween 80)
Polysorbate 80	Surfactant	Pediarix	DTaP+HepB+IPV	≤ 100 mcg (Tween 80)
Polysorbate 80	Surfactant	Pentacel	DTaP+IPV+Hib	10 ppm
Polysorbate 80	Surfactant	Prevnar 13	Pneumococcal 13-valent	100 mcg
Polysorbate 80	Surfactant	Quadracel	DTaP+IPV	10 ppm
Polysorbate 80	Surfactant	RotaTeq	Rotavirus	Amount not specified in Package Insert
Polysorbate 80	Surfactant	Trumenba	Meningococcal Group B	0.018 mg
Porcine DNA	Residual Medium	Rotarix	Rotavirus	PCV-1
Porcine DNA	Residual Medium	RotaTeq	Rotavirus	PCV-1 and PCV-2
Potassium Aluminum Sulfate	Adjuvant	Comvax	Hib+HepB	Amount not specified in Package Insert
Potassium Aluminum Sulfate	Adjuvant	Recombivax HB	HepB	Amount not specified in Package Insert
Potassium Chloride	Buffer	Afluria	Influenza	20 mcg
Potassium Chloride	Buffer	ProQuad	MMRV	60 mcg

Potassium Chloride	Medium Nutrient	Rotarix	Rotavirus	Ingredient of DMEM medium
Potassium Chloride	Buffer	Varivax	Varicella	0.08 mg
Potassium Chloride	Buffer	Zostavax	Varicella Zoster	0.10 mg
Potassium Glutamate	Stabilizer	RabAvert	Rabies	1 mg
Protamine Sulfate	Protein Purifier	Ixiaro	Japanese Encephalitis	≤ 1 mcg/mL
Salts and Sugars, Inorganic	Medium Nutrient	BioThrax	Anthrax	Amount not specified in Package Insert
Salts, Inorganic	Medium Nutrient	Twinrix	HepA+HepB	Sodium chloride
Salts, Mineral	Adjust tonicity	ActHIB	Hib	0.4% sodium chloride in diluent
Salts, Mineral	Adjust tonicity	Afluria	Influenza	4.1 mg sodium chloride
Salts, Mineral	Adjust tonicity	Bexsero	Meningococcal Group B	3.125 mg sodium chloride
Salts, Mineral	Adjust tonicity	BioThrax	Anthrax	0.85% sodium chloride
Salts, Mineral	Adjust tonicity	Boostrix	Tdap	4.5 mg sodium chloride
Salts, Mineral	Adjust tonicity	Cervarix	HPV	4.4 mg sodium chloride
Salts, Mineral	Adjust tonicity	Comvax	Hib+HepB	0.9% sodium chloride
Salts, Mineral	Adjust tonicity	Engerix-B	HepB	9 mg/mL sodium chloride
Salts, Mineral	Adjust tonicity	Flublok	Influenza	4.4 mg sodium chloride
Salts, Mineral	Adjust tonicity	Gardasil	HPV	9.56 mg sodium chloride
Salts, Mineral	Adjust tonicity	Gardasil 9	HPV	9.56 mg sodium chloride
Salts, Mineral	Adjust tonicity	Hiberix	Hib	0.9% sodium chloride in diluent
Salts, Mineral	Adjust tonicity	Infanrix	DTaP	4.5 mg sodium chloride
Salts, Mineral	Adjust tonicity	Kinrix	DTaP+IPV	4.5 mg sodium chloride
Salts, Mineral	Adjust tonicity	Menhibrix	Meningococcal CY+Hib	0.9% sodium chloride
Salts, Mineral	Adjust tonicity	MMR-II	MMR	Sodium chloride, amount not specified
Salts, Mineral	Adjust tonicity	Pediarix	DTaP+HepB+IPV	4.5 mg sodium chloride
Salts, Mineral	Adjust tonicity	PedvaxHIB	Hib+HepB	0.9% sodium chloride
Salts, Mineral	Adjust tonicity	ProQuad	MMRV	2.4 mg sodium chloride
Salts, Mineral	Adjust tonicity	Recombivax HB	HepB	Ingredient of fermentation medium
Salts, Mineral	Adjust tonicity	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Salts, Mineral	Adjust tonicity	Tenivac	Td	Sodium chloride, amount not specified
Salts, Mineral	Adjust tonicity	Twinrix	HepA+HepB	Sodium chloride, amount not specifieds
Salts, Mineral	Adjust tonicity	Typhim Vi	Typhoid	4.150 mg sodium chloride
Salts, Mineral	Adjust tonicity	Vaqta	HepA	0.9% sodium chloride
Salts, Mineral	Adjust tonicity	Varivax	Varicella	3.2 mg sodium chloride
Salts, Mineral	Adjust tonicity	YF-Vax	Yellow Fever	Diluent
Salts, Mineral	Adjust tonicity	Zostavax	Varicella Zoster	3.99 mg sodium chloride
Sodium Bicarbonate	Buffer	ProQuad	MMRV	0.17 mg
Sodium Borate	Buffer	Comvax	Hib+HepB	35 mcg (decahydrate)
Sodium Borate	Buffer	Gardasil	HPV	35 mcg
Sodium Borate	Buffer	Gardasil 9	HPV	35 mcg
Sodium Borate	Stabilizer	Vaqta	HepA	70 mcg
Sodium Citrate	Adjust pH	RotaTeq	Rotavirus	Amount not specified in Package Insert
Sodium Deoxycholate	Surfactant	Fluarix Quad	Influenza	≤ 65 mcg
Sodium Deoxycholate	Surfactant	Flulaval Quad	Influenza	≤ 50 mcg
Sodium Hydroxide		RotaTeq	Rotavirus	
Sodium Metabisulphite	Stabilizer	Ixiaro	Japanese Encephalitis	≤ 200 ppm
Sodium Pyruvate	Medium Nutrient	Rotarix	Rotavirus	in DMEM (medium)
Sodium Taurodeoxycholate	Protein Purifier	Afluria	Influenza	≤ 10 ppm (residual amounts)
Sorbitan Trioleate		Fluad	Influenza	1.172 mg
Sorbitol	Stabilizer, solvent	MMR-II	MMR	14.5 mg
Sorbitol	Stabilizer, solvent	ProQuad	MMRV	1.8 mg
Sorbitol	Stabilizer, solvent	Rotarix	Rotavirus	Amount not specified in Package Insert
Sorbitol	Stabilizer, solvent	YF-Vax	Yellow Fever	Amount not specified in Package Insert
Streptomycin	Antimicrobial	IPOL	Polio	200 ng
Succinate Buffer	Stabilizer	Prenar 13	Pneumococcal 13-valent	295 mcg
Sucrose	Stabilizer	ActHIB	Hib	8.5%
Sucrose	Stabilizer	Bexsero	Meningococcal Group B	10 mg
Sucrose	Stabilizer	FluMist Quad	Influenza	13.68 mg/dose
Sucrose	Stabilizer	JE-Vax	Japanese Encephalitis	40% w/v
Sucrose	Stabilizer	Menhibrix	Meningococcal CY+Hib	12.6 mg
Sucrose	Stabilizer	MMR-II	MMR	1.9 mg
Sucrose	Stabilizer	Pentacel	DTaP+IPV+Hib	42.5 mg
Sucrose	Stabilizer	ProQuad	MMRV	≤ 21 mg
Sucrose	Stabilizer	Rotarix	Rotavirus	Amount not specified in Package Insert
Sucrose	Stabilizer	RotaTeq	Rotavirus	Amount not specified in Package Insert
Sucrose	Stabilizer	Varivax	Varicella	25 mg
Sucrose	Stabilizer	Vivotif	Typhoid	26-130 mg/capsule
Sucrose	Stabilizer	Zostavax	Varicella Zoster	31.16 mg
Thimerosal	Preservative	Afluria	Influenza	24.5 mcg mercury
Thimerosal	Manufacturing	DT	DT	≤ 0.3 mcg mercury, trace amounts

	Residual			
Thimerosal	Preservative	Flulaval Quad	Influenza	< 25 mcg mercury
Thimerosal	Preservative	Fluvirin	Influenza	25 mcg mercury/dose in multi-dose vial; ≤ 1 mcg/dose mercury in prefilled syringe
Thimerosal	Preservative	Fluzone	Influenza	25 mcg mercury/0.5mL
Thimerosal	Preservative	Fluzone Quad	Influenza	25 mcg mercury in multi-dose vial
Thimerosal	Preservative	JE-Vax	Japanese Encephalitis	0.007%
Thimerosal	Preservative	Menomune	Meningococcal	25 mcg mercury/dose in multi-dose diluent None in single-dose
Thimerosal	Manufacturing Residue	Td	Td	≤ 0.3 mcg mercury, trace amounts
Vero Cells	Growth Medium	IPOL	Polio	Amount not specified in Package Insert
Vero cells	Medium Nutrient	Ixiaro	Japanese Encephalitis	Amount not specified in Package Insert
Vero Cells	Growth Medium	Kinrix	DTaP+IPV	Amount not specified in Package Insert
Vero Cells	Growth Medium	Pediarix	DTaP+HepB+IPV	Amount not specified in Package Insert
Vero Cells	Growth Medium	Rotarix	Rotavirus	Amount not specified in Package Insert
Vero Cells	Growth Medium	RotaTaq	Rotavirus	Amount not specified in Package Insert
Vitamins	Medium Nutrient	BioThrax	Anthrax	Ingredient of growth medium
Vitamins	Medium Nutrient	Cervarix	HPV	Ingredient of growth medium
Vitamins	Protein Purifier	Fluarix Quad	Influenza	≤ 0.135 mg α-tocopheryl hydrogen succinate
Vitamins	Protein Purifier	Flublok	Influenza	Ingredient of growth medium
Vitamins	Protein Purifier	Flulaval Quad	Influenza	≤ 320 mcg α-tocopheryl hydrogen succinate
Vitamins	Medium Nutrient	Gardasil	HPV	Ingredient of growth medium
Vitamins	Medium Nutrient	Gardasil 9	HPV	Ingredient of growth medium
Vitamins	Medium Nutrient	MMR-II	MMR	Ingredient in grown media
Vitamins	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in Package Insert
Xanthan	Thickening agent	Rotarix	Rotavirus	Ingredient in diluent
Yeast	Medium Nutrient	Comvax	Hib+HepB	≤ 1% yeast protein
Yeast	Medium Nutrient	Engerix-B	HepB	≤ 5% yeast protein
Yeast	Medium Nutrient	Gardasil	HPV	< 7 mcg yeast protein/dose
Yeast	Medium Nutrient	Gardasil 9	HPV	< 7 mcg yeast protein/dose
Yeast	Medium Nutrient	Menveo	Meningococcal	Ingredient in growth medium
Yeast	Medium Nutrient	Pediarix	DTaP+HepB+IPV	≤ 5% yeast protein
Yeast	Medium Nutrient	Prevnar	Pneumococcal 7-valent	Ingredient of growth medium
Yeast	Medium Nutrient	Prevnar 13	Pneumococcal 13-valent	Ingredient of growth medium
Yeast	Medium Nutrient	Recombivax HB	HepB	< 1% yeast protein
Yeast	Medium Nutrient	Twinrix	HepA+HepB	≤ 5% yeast protein
Yeast	Medium Nutrient	Vivotif	Typhoid	Amount not specified in Package Insert

This information is correct to the best of our knowledge. Any inaccuracies should be reported to us at info@hopkinsvaccine.org

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