

Vaccine Excipients by Vaccine Type

updated October 2024

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
(4-hydroxybutyl)azanediyl) bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	Lipid	Comirnaty (Pfizer)	COVID-19	0.43 mg/0.3 mL dose
1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC])	Lipid	Comirnaty (Pfizer)	COVID-19	0.09 mg/0.3 mL dose
Cholesterol	Lipid	Comirnaty (Pfizer)	COVID-19	0.19 mg/0.3 mL dose
Polyethylene Glycol	Lipid	Comirnaty (Pfizer)	COVID-19	0.05 mg 2[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide/0.3 mL dose
Sucrose	Stabilizer	Comirnaty (Pfizer)	COVID-19	31 ng/0.3 mL dose
Tromethamine	Stabilizer	Comirnaty (Pfizer)	COVID-19	0.06 mg/0.3 mL dose
Tromethamine Hydrochloride	Stabilizer	Comirnaty (Pfizer)	COVID-19	0.4 mg/0.3 mL dose
1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC])	Lipid	Spikevax (Moderna)	COVID-19	Amount not specified in package insert
Acetic Acid	Adjust pH	Spikevax (Moderna)	COVID-19	0.021 mg
Cholesterol	Lipid	Spikevax (Moderna)	COVID-19	Amount not specified in package insert
Phosphate Buffer	Buffer	Spikevax (Moderna)	COVID-19	0.10 mg sodium acetate
Polyethylene Glycol	Lipid	Spikevax (Moderna)	COVID-19	1.01 mg (SM-102, polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG])
Sucrose	Stabilizer	Spikevax (Moderna)	COVID-19	43.5 mg
Tromethamine	Stabilizer	Spikevax (Moderna)	COVID-19	0.31 mg
Tromethamine Hydrochloride	Stabilizer	Spikevax (Moderna)	COVID-19	1.2 mg
Aluminum Phosphate	Adjuvant	DT	DT	1.5 mg
Bovine Casein	Medium Nutrient	DT	DT	Amount not specified in package insert
Dextrose	Medium Nutrient	DT	DT	Amount not specified in package insert
Formaldehyde	Inactivating Agent	DT	DT	<100 mcg
Salts, Inorganic	Medium Nutrient	DT	DT	Sodium chloride – Amount not specified in package insert
Vitamins	Medium Nutrient	DT	DT	Ingredient in growth medium
2-Phenoxyethanol	Stabilizer	Daptacel	DTaP	3.3 mg (0.6% v/v) (not as a preservative)
Aluminum Phosphate	Adjuvant	Daptacel	DTaP	1.5 mg (0.33 mg aluminum)
Ammonium Sulfate	Protein Purifier	Daptacel	DTaP	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Daptacel	DTaP	Amount not specified in package insert
Dimethyl-beta-cyclodextrin	Medium Nutrient	Daptacel	DTaP	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Daptacel	DTaP	≤5 mcg (residual)
Glutaraldehyde	Inactivating Agent	Daptacel	DTaP	<50 ng (residual)
Aluminum Hydroxide	Adjuvant	Infanrix	DTaP	0.5 mg aluminum
Bovine Casein	Medium Nutrient	Infanrix	DTaP	Amount not specified in package insert
Bovine Extract	Stabilizer	Infanrix	DTaP	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Infanrix	DTaP	≤100 mcg (residual)
Glutaraldehyde	Inactivating Agent	Infanrix	DTaP	Amount not specified in package insert
Polysorbate 80	Surfactant	Infanrix	DTaP	≤100 mcg (Tween 80)
Salts, Mineral	Adjust tonicity	Infanrix	DTaP	4.4 mg sodium chloride
Albumin, Bovine Serum	Stabilizer	Pediarix	DTaP+HepB+IPV	VERO cell culture growth
Aluminum	Adjuvant	Pediarix	DTaP+HepB+IPV	≤0.7 mg
Bovine Casein	Medium Nutrient	Pediarix	DTaP+HepB+IPV	Amount not specified in package insert
Bovine Extract	Stabilizer	Pediarix	DTaP+HepB+IPV	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Pediarix	DTaP+HepB+IPV	≤100 mcg (residual)
Glutaraldehyde	Inactivating Agent	Pediarix	DTaP+HepB+IPV	Amount not specified in package insert
Lactalbumin Hydrolysate	Medium Nutrient	Pediarix	DTaP+HepB+IPV	Ingredient in growth medium
Neomycin	Antimicrobial	Pediarix	DTaP+HepB+IPV	≤0.05 ng
Polymyxin B	Antimicrobial	Pediarix	DTaP+HepB+IPV	≤0.01 ng
Polysorbate 80	Surfactant	Pediarix	DTaP+HepB+IPV	≤100 mcg (Tween 80)
Salts, Mineral	Adjust tonicity	Pediarix	DTaP+HepB+IPV	4.4 mg sodium chloride
Vero Cells	Growth Medium	Pediarix	DTaP+HepB+IPV	Amount not specified in package insert
Yeast	Medium Nutrient	Pediarix	DTaP+HepB+IPV	≤5% yeast protein
Albumin, Bovine Serum	Stabilizer	Kinrix	DTaP+IPV	VERO cell culture growth
Aluminum Hydroxide	Adjuvant	Kinrix	DTaP+IPV	≤0.5 mg aluminum
Bovine Casein	Medium Nutrient	Kinrix	DTaP+IPV	Amount not specified in package insert
Bovine Extract	Stabilizer	Kinrix	DTaP+IPV	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Kinrix	DTaP+IPV	≤100 mcg (residual)
Glutaraldehyde	Inactivating Agent	Kinrix	DTaP+IPV	Amount not specified in package insert
Lactalbumin Hydrolysate	Medium Nutrient	Kinrix	DTaP+IPV	Ingredient in growth medium

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Neomycin	Antimicrobial	Kinrix	DTaP+IPV	≤0.05 ng
Polymyxin B	Antimicrobial	Kinrix	DTaP+IPV	≤0.01 ng
Polysorbate 80	Surfactant	Kinrix	DTaP+IPV	≤100 mcg (Tween 80)
Salts, Mineral	Adjust tonicity	Kinrix	DTaP+IPV	≤4.4 mg sodium chloride
Vero Cells	Growth Medium	Kinrix	DTaP+IPV	Amount not specified in package insert
2-Phenoxyethanol	Stabilizer	Quadracel	DTaP+IPV	3.3 mg (0.6 v/v) (not as a preservative)
Albumin, Bovine Serum	Stabilizer	Quadracel	DTaP+IPV	≤50 ng
Aluminum Phosphate	Adjuvant	Quadracel	DTaP+IPV	1.5 mg (0.33 mg aluminum)
Ammonium Sulfate	Protein Purifier	Quadracel	DTaP+IPV	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Quadracel	DTaP+IPV	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Quadracel	DTaP+IPV	≤5 mcg
Glutaraldehyde	Inactivating Agent	Quadracel	DTaP+IPV	<50 ng
MRC-5	Manufacturing Residue	Quadracel	DTaP+IPV	Ingredient in growth medium
Neomycin	Antimicrobial	Quadracel	DTaP+IPV	<4 pg
Polymyxin B Sulfate	Antimicrobial	Quadracel	DTaP+IPV	<4 pg
Polysorbate 80	Surfactant	Quadracel	DTaP+IPV	10 ppm
Albumin, Bovine Serum	Stabilizer	Vaxelis	DTaP+IPV+HepB	≤50 ng
Aluminum	Adjuvant	Vaxelis	DTaP+IPV+HepB	319 mcg aluminum from aluminum salts
Amino Acid	Medium Nutrient	Vaxelis	DTaP+IPV+HepB	Amount not specified in package insert
Ammonium Sulfate	Protein Purifier	Vaxelis	DTaP+IPV+HepB	Ingredient in purification
Ammonium Thiocyanate	Manufacturing residue	Vaxelis	DTaP+IPV+HepB	≤0.125 mcg
Amorphous Aluminum Hydroxyphosphate Sulfate (AAHS)	Adjuvant	Vaxelis	DTaP+IPV+HepB	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Vaxelis	DTaP+IPV+HepB	≤14 mcg
Glutaraldehyde	Inactivating Agent	Vaxelis	DTaP+IPV+HepB	50 ng
Neomycin	Antimicrobial	Vaxelis	DTaP+IPV+HepB	<5 ng
Polymyxin B Sulfate	Antimicrobial	Vaxelis	DTaP+IPV+HepB	<25 ng
Polysorbate 80	Surfactant	Vaxelis	DTaP+IPV+HepB	<0.0056%
Streptomycin sulfate	Manufacturing Residue	Vaxelis	DTaP+IPV+HepB	<200 ng
Yeast	Medium Nutrient	Vaxelis	DTaP+IPV+HepB	≤0.1 mcg
2-Phenoxyethanol	Stabilizer	Pentacel	DTaP+IPV+Hib	3.3 mg (0.6 v/v) (not as a preservative)
Albumin, Bovine Serum	Stabilizer	Pentacel	DTaP+IPV+Hib	≤10 ng
Aluminum Phosphate	Adjuvant	Pentacel	DTaP+IPV+Hib	1.5 mg (0.33 mg aluminum)
Ammonium Sulfate	Protein Purifier	Pentacel	DTaP+IPV+Hib	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Pentacel	DTaP+IPV+Hib	Amount not specified in package insert
Dimethyl-beta-cyclodextrin	Medium Nutrient	Pentacel	DTaP+IPV+Hib	Ingredient in Stainer-Scholte medium
Formaldehyde	Inactivating Agent	Pentacel	DTaP+IPV+Hib	2-7 mcg (residual)
Glutaraldehyde	Inactivating Agent	Pentacel	DTaP+IPV+Hib	<50 ng (residual)
Neomycin	Antimicrobial	Pentacel	DTaP+IPV+Hib	<0.01 pg
Polymyxin B	Antimicrobial	Pentacel	DTaP+IPV+Hib	<0.000001 pg
Polysorbate 80	Surfactant	Pentacel	DTaP+IPV+Hib	<8.1 mcg
Sucrose	Stabilizer	Pentacel	DTaP+IPV+Hib	42.5 mg
Vero cells	Growth Medium	Pentacel	DTaP+IPV+Hib	Amount not specified in package insert
Aluminum	Adjuvant	Havrix	HepA	0.25 mg (as aluminum hydroxide)
Amino Acid	Medium Nutrient	Havrix	HepA	Amino acid supplement - 0.3% w/v
Formaldehyde	Inactivating Agent	Havrix	HepA	≤0.1 mg/mL formalin
MRC-5	Manufacturing Residue	Havrix	HepA	≤5 mcg/mL
Neomycin Sulfate	Antimicrobial	Havrix	HepA	≤40 ng/mL
Polysorbate 20	Surfactant	Havrix	HepA	0.05 mg/mL
Albumin, Bovine	Stabilizer	Vaqtta	HepA	<10 ⁻⁴ mcg
Aluminum	Adjuvant	Vaqtta	HepA	0.45 mg/mL as amorphous aluminum hydroxyphosphate sulfate
DNA	Residual Medium	Vaqtta	HepA	<4 x 10 ⁻⁶ mcg
Formaldehyde	Inactivating Agent	Vaqtta	HepA	<0.8 mcg
MRC-5	Manufacturing Residue	Vaqtta	HepA	Amount not specified in package insert
Neomycin	Antimicrobial	Vaqtta	HepA	<10 ppb (residual)
Salts, Mineral	Adjust tonicity	Vaqtta	HepA	0.9% sodium chloride
Sodium Borate	Stabilizer	Vaqtta	HepA	70 mcg/mL
Aluminum Phosphate and Aluminum Hydroxide	Adjuvant	Twinrix	HepA+HepB	0.45 mg/mL aluminum
Amino Acid	Medium Nutrient	Twinrix	HepA+HepB	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Twinrix	HepA+HepB	≤0.1 mg/mL formalin
MRC-5	Manufacturing Residue	Twinrix	HepA+HepB	≤2.5 mcg/mL
Neomycin Sulfate	Antimicrobial	Twinrix	HepA+HepB	≤20 ng/mL
Phosphate Buffer	Buffer	Twinrix	HepA+HepB	Amount not specified in package insert
Polysorbate 20	Surfactant	Twinrix	HepA+HepB	Amount not specified in package insert
Salts, Inorganic	Medium Nutrient	Twinrix	HepA+HepB	Sodium chloride – Amount not specified in package insert

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Salts, Mineral	Adjust tonicity	Twinrix	HepA+HepB	Aluminum salts – Amount not specified in package insert
Yeast	Medium Nutrient	Twinrix	HepA+HepB	≤5% yeast protein
Aluminum	Adjuvant	Engerix-B	HepB	0.5 mg/mL aluminum as aluminum hydroxide
Phosphate Buffer	Buffer	Engerix-B	HepB	0.9 mg/mL Disodium phosphate dihydrate 0.7 mg/mL Sodium dihydrogen phosphate dihydrate
Salts, Mineral	Adjust tonicity	Engerix-B	HepB	8 mg/mL sodium chloride
Yeast	Medium Nutrient	Engerix-B	HepB	≤5% yeast protein
CpG 1018	Adjuvant	Heplisav-B	HepB	3000 mcg
Deoxycholate	Emulsifier	Heplisav-B	HepB	<0.9 ppm
Phosphate Buffer	Buffer	Heplisav-B	HepB	9.0 mg/mL sodium chloride 1.75 mg/mL sodium phosphate, dibasic dodecahydrate 0.48 mg/mL sodium phosphate, monobasic dihydrate
Polysorbate 80	Surfactant	Heplisav-B	HepB	0.1 mg/mL
Vitamins	Medium Nutrient	Heplisav-B	HepB	Amount not specified in package insert
Yeast	Medium Nutrient	Heplisav-B	HepB	Yeast protein: ≤5.0% of total protein (residual) Yeast DNA: <20 pg
Albumin, Bovine Serum	Stabilizer	Prehevbrio	HepB	<2.5 ng/mL
Aluminum Hydroxide	Adjuvant	Prehevbrio	HepB	0.5 mg/mL aluminum
Amino Acid	Medium Nutrient	Prehevbrio	HepB	Amount not specified in package insert
CHO cell proteins	Residual Medium	Prehevbrio	HepB	≤2.5 ng/mL
DNA, CHO cell	Residual Medium	Prehevbrio	HepB	≤10 pg/mL
Formaldehyde	Inactivating Agent	Prehevbrio	HepB	≤500 ng/mL
Phosphate Buffer	Buffer	Prehevbrio	HepB	disodium hydrogen phosphate dodecahydrate, 0.38 mg/dose potassium dihydrogen phosphate anhydrous, 0.02 mg/dose
Potassium Chloride	Buffer	Prehevbrio	HepB	0.02 mg/mL
Salts, Mineral	Adjust tonicity	Prehevbrio	HepB	8.45 mg/mL sodium chloride
Aluminum	Adjuvant	Recombivax HB	HepB	0.5 mg/mL
Amino Acid	Medium Nutrient	Recombivax HB	HepB	In fermentation medium
Amino Acid	Medium Nutrient	Recombivax HB	HepB	Amount not specified in package insert
Dextrose	Medium Nutrient	Recombivax HB	HepB	Ingredient in fermentation medium
Formaldehyde	Inactivating Agent	Recombivax HB	HepB	<15 mcg/mL (residual)
Peptone, Soy	Medium Nutrient	Recombivax HB	HepB	Ingredient in fermentation medium
Potassium Aluminum Sulfate	Adjuvant	Recombivax HB	HepB	Amount not specified in package insert
Salts, Mineral	Adjust tonicity	Recombivax HB	HepB	Ingredient in fermentation medium
Yeast	Medium Nutrient	Recombivax HB	HepB	<1% yeast protein
Ammonium Sulfate	Protein Purifier	ActHIB	Hib	Ingredient in purification
Bovine Casein	Medium Nutrient	ActHIB	Hib	Amount not specified in package insert
Formaldehyde	Inactivating Agent	ActHIB	Hib	<0.5 mcg
Salts, Mineral	Adjust tonicity	ActHIB	Hib	0.4% sodium chloride in diluent
Sucrose	Stabilizer	ActHIB	Hib	8.5%
Formaldehyde	Inactivating Agent	Hiberix	Hib	<0.5 mcg (residual)
Lactose	Stabilizer	Hiberix	Hib	12.6 mg
Salts, Mineral	Adjust tonicity	Hiberix	Hib	0.9% sodium chloride in diluent
Aluminum	Adjuvant	PedvaxHIB	Hib+HepB	225 mcg
Amino Acid	Medium Nutrient	PedvaxHIB	Hib+HepB	Amount not specified in package insert
Phenol	Preservative	PedvaxHIB	Hib+HepB	Ingredient in purification
Salts, Mineral	Adjust tonicity	PedvaxHIB	Hib+HepB	0.9% sodium chloride
Aluminum	Adjuvant	Gardasil	HPV	225 mcg as amorphous aluminum hydroxyphosphate sulfate
Amino Acid	Medium Nutrient	Gardasil	HPV	Ingredient in growth medium
Carbohydrates	Medium Nutrient	Gardasil	HPV	Amount not specified in package insert
L-histidine	Medium Nutrient	Gardasil	HPV	0.78 mg
Polysorbate 80	Surfactant	Gardasil	HPV	50 mcg
Salts, Mineral	Adjust tonicity	Gardasil	HPV	9.56 mg sodium chloride
Sodium Borate	Buffer	Gardasil	HPV	35 mcg
Vitamins	Medium Nutrient	Gardasil	HPV	Amount not specified in package insert
Yeast	Medium Nutrient	Gardasil	HPV	<7 mcg yeast protein
Aluminum	Adjuvant	Gardasil 9	HPV	500 mcg as amorphous aluminum hydroxyphosphate sulfate
Amino Acid	Medium Nutrient	Gardasil 9	HPV	Amount not specified in package insert
Carbohydrates	Medium Nutrient	Gardasil 9	HPV	Amount not specified in package insert
L-histidine	Medium Nutrient	Gardasil 9	HPV	0.78 mg
Polysorbate 80	Surfactant	Gardasil 9	HPV	50 mcg
Salts, Mineral	Adjust tonicity	Gardasil 9	HPV	9.56 mg sodium chloride
Sodium Borate	Buffer	Gardasil 9	HPV	35 mcg

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Vitamins	Medium Nutrient	Gardasil 9	HPV	Amount not specified in package insert
Yeast	Medium Nutrient	Gardasil 9	HPV	<7 mcg yeast protein
Albumin, Egg (Ovalbumin)	Residual Medium	Afluria	Influenza	≤1 mcg
Beta-Propiolactone	Viral Inactivator	Afluria	Influenza	<2.3 ng
Calcium Chloride	Medium Nutrient	Afluria	Influenza	0.5 mcg
Hydrocortisone	Medium Nutrient	Afluria	Influenza	≤0.56 ng
Neomycin Sulfate	Antimicrobial	Afluria	Influenza	≤61.5 ng
Phosphate Buffer	Buffer	Afluria	Influenza	20 mcg monobasic potassium phosphate 80 mcg monobasic sodium phosphate 300 mcg diabolic sodium phosphate
Polymyxin B	Antimicrobial	Afluria	Influenza	≤10.5 ng
Potassium Chloride	Buffer	Afluria	Influenza	20 mcg
Salts, Mineral	Adjust tonicity	Afluria	Influenza	4.1 mg sodium chloride
Sodium Taurodeoxycholate	Protein Purifier	Afluria	Influenza	≤10 ppm (residual)
Sucrose	Stabilizer	Afluria	Influenza	<10 mcg
Thimerosal	Preservative	Afluria	Influenza	24.5 mcg mercury only in multi-dose vial; none in single dose
Cetyltrimethylammonium Bromide (CTAB)	Protein Purifier	Fluad	Influenza	≤12 mcg
Citric Acid Monohydrate	Buffer	Fluad	Influenza	0.04 mg at pH 6.9-7.7
Egg Protein (ovalbumin)	Residual Medium	Fluad	Influenza	<0.4 mcg
Formaldehyde	Inactivating Agent	Fluad	Influenza	≤10 mcg
Hydrocortisone	Medium Nutrient	Fluad	Influenza	≤0.005 ng
Kanamycin	Antimicrobial	Fluad	Influenza	≤0.03 mcg
MF59	Adjuvant	Fluad	Influenza	Amount not specified in package insert
Neomycin	Antimicrobial	Fluad	Influenza	≤0.02 mcg
Polysorbate 80	Surfactant	Fluad	Influenza	1.175 mg
Sodium Citrate Dihydrate	Buffer	Fluad	Influenza	0.66 mg
Sorbitan Trioleate	Stabilizer	Fluad	Influenza	1.175 mg
Squalene	Adjuvant	Fluad	Influenza	9.75 mg
Albumin, Egg (Ovalbumin)	Residual Medium	Fluarix	Influenza	≤0.05 mcg
Formaldehyde	Inactivating Agent	Fluarix	Influenza	≤5 mcg
Gentamicin Sulfate	Antimicrobial	Fluarix	Influenza	≤0.15 mcg
Hydrocortisone	Medium Nutrient	Fluarix	Influenza	≤0.0015 mcg
Octoxynol-10 (Triton X-100)	Surfactant	Fluarix	Influenza	≤0.085 mg
Polysorbate 80 (Tween 80)	Surfactant	Fluarix	Influenza	≤0.415 mg (Tween 80)
Sodium Deoxycholate	Surfactant	Fluarix	Influenza	≤50 mcg
Vitamins	Protein Purifier	Fluarix	Influenza	≤0.1 mg α-tocopheryl hydrogen succinate
Amino Acid	Medium Nutrient	Flublok	Influenza	Ingredient in growth medium
DNA	Residual Medium	Flublok	Influenza	≤10 ng
Octoxynol-10 (Triton X-100)	Surfactant	Flublok	Influenza	≤100 mcg
Phosphate Buffer	Buffer	Flublok	Influenza	0.2 mcg monobasic sodium phosphate 0.5 mg dibasic sodium phosphate
Polysorbate 20	Surfactant	Flublok	Influenza	≤27.5 mcg (Tween 20)
Salts, Mineral	Adjust tonicity	Flublok	Influenza	4.4 mg sodium chloride
Vitamins	Protein Purifier	Flublok	Influenza	Ingredient in growth medium
Beta-Propiolactone	Viral Inactivator	Flucelvax	Influenza	<0.5 mcg
Cetyltrimethylammonium Bromide (CTAB)	Protein Purifier	Flucelvax	Influenza	≤13.5mcg
DNA	Residual Medium	Flucelvax	Influenza	≤10 ng MDCK cell DNA ≤21.6 mcg MDCK cell protein
Polysorbate 80 (Tween 80)	Surfactant	Flucelvax	Influenza	≤1125 mcg (Tween 80)
Protein	Residual Medium	Flucelvax	Influenza	≤ 225 mcg
Thimerosal	Preservative	Flucelvax	Influenza	<25 mcg mercury only in multi-dose vial; none in single dose
Albumin, Egg (Ovalbumin)	Residual Medium	Flulaval	Influenza	≤0.3 mcg
Formaldehyde	Inactivating Agent	Flulaval	Influenza	≤25 mcg
Polysorbate 80	Surfactant	Flulaval	Influenza	≤665 mcg
Sodium Deoxycholate	Surfactant	Flulaval	Influenza	≤50 mcg
Vitamins	Protein Purifier	Flulaval	Influenza	≤240 mcg α-tocopheryl hydrogen succinate
Albumin, Egg (Ovalbumin)	Residual Medium	FluMist	Influenza	≤0.024 mcg/0.2mL dose
Arginine		FluMist	Influenza	2.42 mg/0.2mL dose
Ethylenediaminetetraacetic acid (EDTA)	Preservative	FluMist	Influenza	<2.3 mcg/0.2mL dose
Gelatin, Porcine, Hydrolyzed	Stabilizer	FluMist	Influenza	2.00 mg/0.2 mL dose
Gentamicin Sulfate	Antimicrobial	FluMist	Influenza	<0.015 mcg/mL
Monosodium glutamate	Stabilizer	FluMist	Influenza	0.188 mg/0.2 mL dose
Phosphate Buffer	Buffer	FluMist	Influenza	0.96 mg/0.2 mL dose monobasic potassium phosphate 2.26 mg/0.2mL dose dibasic potassium phosphate

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Sucrose	Stabilizer	FluMist	Influenza	13.68 mg/0.2 mL dose
Albumin, Egg (Ovalbumin)	Residual Medium	Fluvirin	Influenza	≤1 mcg
Beta-Propiolactone	Viral Inactivator	Fluvirin	Influenza	≤0.5 mcg
Neomycin	Antimicrobial	Fluvirin	Influenza	≤2.5 mcg
Nonylphenol Ethoxylate	Surfactant	Fluvirin	Influenza	≤0.015% w/v
Polymyxin	Antimicrobial	Fluvirin	Influenza	≤3.75 mcg
Thimerosal	Preservative	Fluvirin	Influenza	25 mcg mercury/dose in multi-dose vial; ≤1 mcg/dose mercury in prefilled syringe
Formaldehyde	Inactivating Agent	FluZone	Influenza	≤100 mcg
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone	Influenza	≤150 mcg
Phosphate Buffer	Buffer	FluZone	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Thimerosal	Preservative	FluZone	Influenza	25 mcg mercury in multi-dose vial; none in single dose
Formaldehyde	Inactivating Agent	FluZone High-Dose	Influenza	≤100 mcg
Octylphenol Ethoxylate (Triton X-100)	Surfactant	FluZone High-Dose	Influenza	≤250 mcg
Phosphate Buffer	Buffer	FluZone High-Dose	Influenza	Sodium phosphate-buffered isotonic sodium chloride solution - "quantity sufficient to appropriate volume"
Ammonium Sulfate	Protein Purifier	MenQuadfi	Meningococcal ACWY	Ingredient in purification
Formaldehyde	Inactivating Agent	MenQuadfi	Meningococcal ACWY	<3 mcg/mL
Phosphate Buffer	Buffer	MenQuadfi	Meningococcal ACWY	1.23mg sodium acetate
Salts, Mineral	Adjust tonicity	MenQuadfi	Meningococcal ACWY	3.35 mg sodium chloride
Ammonium Sulfate	Protein Purifier	Menactra	Meningococcal ACYW-135	Ingredient in purification
Bovine Casein	Medium Nutrient	Menactra	Meningococcal ACYW-135	Amount not specified in package insert
Bovine, Casamino Acid	Stabilizer	Menactra	Meningococcal ACYW-135	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Menactra	Meningococcal ACYW-135	<2.66 mcg
Phosphate Buffer	Buffer	Menactra	Meningococcal ACYW-135	Sodium phosphate buffered isotonic sodium chloride solution; amount not specified
Amino Acid	Medium Nutrient	Menveo	Meningococcal ACYW-135	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Menveo	Meningococcal ACYW-135	≤0.30 mcg
Yeast	Medium Nutrient	Menveo	Meningococcal ACYW-135	Amount not specified in package insert
Aluminum Phosphate	Adjuvant	Penbraya	Meningococcal ACYW-135	0.25 mg aluminum
Dextrose	Medium Nutrient	Penbraya	Meningococcal ACYW-135	Amount not specified in package insert
L-histidine	Medium Nutrient	Penbraya	Meningococcal ACYW-135	0.78 mg
Polysorbate 80	Surfactant	Penbraya	Meningococcal ACYW-135	0.018 mg at pH 6.0
Salts, Mineral	Adjust tonicity	Penbraya	Meningococcal ACYW-135	4.65 mg sodium chloride
Sucrose	Stabilizer	Penbraya	Meningococcal ACYW-135	28 mg
Trometamol	Stabilizer	Penbraya	Meningococcal ACYW-135	0.097 mg
Yeast	Medium Nutrient	Penbraya	Meningococcal ACYW-135	Amount not specified in package insert
Aluminum Hydroxide	Adjuvant	Bexsero	Meningococcal B	1.5 mg (0.519 mg aluminum)
Histidine	Medium Nutrient	Bexsero	Meningococcal B	0.776 mg
Kanamycin	Antimicrobial	Bexsero	Meningococcal B	<0.01 mcg
Salts, Mineral	Adjust tonicity	Bexsero	Meningococcal B	3.125 mg sodium chloride
Sucrose	Stabilizer	Bexsero	Meningococcal B	10 mg
Aluminum	Adjuvant	Trumenba	Meningococcal B	0.25 mg
Histidine	Medium Nutrient	Trumenba	Meningococcal B	10 mM
Polysorbate 80	Surfactant	Trumenba	Meningococcal B	0.018 mg
Albumin, Bovine Serum	Stabilizer	MMR-II	MMR	<1 ppm
Albumin, Human	Diluent/Stabilizer	MMR-II	MMR	≤0.3 mg
Chick Embryo	Residual Medium	MMR-II	MMR	No intact cells (may have trace residual protein)
Gelatin, hydrolyzed	Stabilizer	MMR-II	MMR	14.5 mg
Neomycin	Antimicrobial	MMR-II	MMR	25 mcg
Sorbitol	Stabilizer, solvent	MMR-II	MMR	14.5 mg

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Sucrose	Stabilizer	MMR-II	MMR	1.9 mg
Albumin, Bovine serum	Stabilizer	Priorix	MMR	≤50 mcg
Albumin, Egg (Ovalbumin)	Residual Medium	Priorix	MMR	≤60 mcg
Amino Acid	Medium Nutrient	Priorix	MMR	9 mg
Chick Embryo	Residual Medium	Priorix	MMR	Amount not specified in package insert
Lactose	Stabilizer	Priorix	MMR	32 mg anhydrous lactose
Mannitol	Stabilizer	Priorix	MMR	8 mg
MRC-5	Manufacturing Residue	Priorix	MMR	Amount not specified in package insert
Neomycin Sulfate	Antimicrobial	Priorix	MMR	≤25 mcg
Albumin, Bovine serum	Stabilizer	ProQuad	MMRV	≤0.5 mcg
Albumin, Human	Diluent/Stabilizer	ProQuad	MMRV	≤0.31 mg
Chick Embryo	Residual Medium	ProQuad	MMRV	No intact cells (may have trace residual protein)
DNA	Residual Medium	ProQuad	MMRV	Residual component of MRC-5 cells
Gelatin, hydrolyzed	Stabilizer	ProQuad	MMRV	11 mg
Monosodium L-glutamate	Stabilizer	ProQuad	MMRV	0.40 mg
MRC-5	Manufacturing Residue	ProQuad	MMRV	Residual
Neomycin	Antimicrobial	ProQuad	MMRV	<16 mcg
Phosphate Buffer	Buffer	ProQuad	MMRV	36 mcg potassium phosphate dibasic 72 mcg potassium phosphate monobasic 0.34 mg sodium phosphate dibasic
Potassium Chloride	Buffer	ProQuad	MMRV	60 mcg
Salts, Mineral	Adjust tonicity	ProQuad	MMRV	2.4 mg sodium chloride
Sodium Bicarbonate	Buffer	ProQuad	MMRV	0.17 mg
Sorbitol	Stabilizer, solvent	ProQuad	MMRV	1.8 mg
Sucrose	Stabilizer	ProQuad	MMRV	21 mg
Aluminum	Adjuvant	Pevnar 13	Pneumococcal 13	125 mcg
Ammonium Sulfate	Protein Purifier	Pevnar 13	Pneumococcal 13	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Pevnar 13	Pneumococcal 13	Amount not specified in package insert
Peptone, Soy	Medium Nutrient	Pevnar 13	Pneumococcal 13	Ingredient in growth medium
Polysorbate 80	Surfactant	Pevnar 13	Pneumococcal 13	100 mcg
Succinate Buffer	Stabilizer	Pevnar 13	Pneumococcal 13	295 mcg
Yeast	Medium Nutrient	Pevnar 13	Pneumococcal 13	Ingredient in growth medium
Aluminum	Adjuvant	Vaxneuvance	Pneumococcal 15	125 mcg aluminum as aluminum phosphate adjuvant
Dextrose	Medium Nutrient	Vaxneuvance	Pneumococcal 15	Amount not specified in package insert
L-histidine	Medium Nutrient	Vaxneuvance	Pneumococcal 15	1.55 mg
Peptone, Soy	Medium Nutrient	Vaxneuvance	Pneumococcal 15	Amount not specified in package insert
Polysorbate 20	Surfactant	Vaxneuvance	Pneumococcal 15	1 mg
Salts, Mineral	Adjust tonicity	Vaxneuvance	Pneumococcal 15	4.50 mg sodium chloride
Yeast	Medium Nutrient	Vaxneuvance	Pneumococcal 15	Amount not specified in package insert
Aluminum	Adjuvant	Pevnar 20	Pneumococcal 20	125 mcg as aluminum phosphate
Bovine, Casamino Acid	Stabilizer	Pevnar 20	Pneumococcal 20	Amount not specified in package insert
Peptone, Soy	Medium Nutrient	Pevnar 20	Pneumococcal 20	Ingredient in growth medium
Polysorbate 80	Surfactant	Pevnar 20	Pneumococcal 20	100 mcg
Salts, Mineral	Adjust tonicity	Pevnar 20	Pneumococcal 20	4.4 mg sodium chloride
Succinate Buffer	Stabilizer	Pevnar 20	Pneumococcal 20	294 mcg
Yeast	Medium Nutrient	Pevnar 20	Pneumococcal 20	Ingredient in growth medium
Dextrose	Medium Nutrient	Capvaxive	Pneumococcal 21	Amount not specified in package insert
L-histidine	Medium Nutrient	Capvaxive	Pneumococcal 21	1.55 mg
Phenol	Inactivating agent	Capvaxive	Pneumococcal 21	Ingredient in purification
Polysorbate 20	Surfactant	Capvaxive	Pneumococcal 21	0.50 mg
Salts, Mineral	Adjust tonicity	Capvaxive	Pneumococcal 21	4.49 mg sodium chloride
Yeast	Medium Nutrient	Capvaxive	Pneumococcal 21	Amount not specified in package insert
Phenol	Preservative	Pneumovax 23	Pneumococcal 23	Saline containing 0.25% phenol
Salts, Mineral	Adjust tonicity	Pneumovax 23	Pneumococcal 23	Ingredient in isotonic saline solution
Amino Acid	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
Calcium Carbonate	Buffer	Rotarix	Rotavirus	Ingredient in diluent - Amount not specified in package insert
Calcium Chloride	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
Dextran	Stabilizer	Rotarix	Rotavirus	Amount not specified in package insert
D-glucose	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Ferric (III) Nitrate	Medium Nutrient	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
L-cystine	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
L-tyrosine	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
Magnesium Sulfate	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
Phosphate Buffer	Buffer	Rotarix	Rotavirus	Sodium phosphate in DMEM (medium)
Porcine DNA	Residual Medium	Rotarix	Rotavirus	PCV-1
Potassium Chloride	Medium Nutrient	Rotarix	Rotavirus	Ingredient in DMEM medium
Salts, Mineral	Adjust tonicity	Rotarix	Rotavirus	In DMEM (Dulbecco's Modified Eagle Medium)
Sodium Pyruvate	Medium Nutrient	Rotarix	Rotavirus	in DMEM (medium)

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Sorbitol	Stabilizer, solvent	Rotarix	Rotavirus	Amount not specified in package insert
Sucrose	Stabilizer	Rotarix	Rotavirus	Amount not specified in package insert
Vero Cells	Growth Medium	Rotarix	Rotavirus	Amount not specified in package insert
Vitamins	Medium Nutrient	Rotarix	Rotavirus	Amount not specified in package insert
Xanthan	Thickening agent	Rotarix	Rotavirus	Ingredient in diluent
Albumin, Bovine Serum	Stabilizer	RotaTeq	Rotavirus	Trace amounts
DNA	Residual Medium	RotaTeq	Rotavirus	Residual component of manufacturing process
Phosphate Buffer	Buffer	RotaTeq	Rotavirus	Sodium phosphate monobasic monohydrate
Polysorbate 80	Surfactant	RotaTeq	Rotavirus	Amount not specified in package insert
Sodium Citrate	Adjust pH	RotaTeq	Rotavirus	Amount not specified in package insert
Sodium Hydroxide	Adjust pH	RotaTeq	Rotavirus	Amount not specified in package insert
Sucrose	Stabilizer	RotaTeq	Rotavirus	Amount not specified in package insert
Vero Cells	Growth Medium	RotaTeq	Rotavirus	Amount not specified in package insert
Mannitol	Stabilizer	Abrysvo	RSV	22.5 mg
Polysorbate 80	Surfactant	Abrysvo	RSV	0.08 mg
Salts, Mineral	Adjust tonicity	Abrysvo	RSV	1.1 mg sodium chloride
Sucrose	Stabilizer	Abrysvo	RSV	11.3 mg
Tromethamine	Stabilizer	Abrysvo	RSV	0.11 mg
Tromethamine Hydrochloride	Stabilizer	Abrysvo	RSV	1.04 mg
AS01 _E	Adjuvant	AREXVY	RSV	Amount not specified in package insert
Cholesterol	Lipid	AREXVY	RSV	0.125 mg
DNA	Residual Medium	AREXVY	RSV	≤0.80 ng/mg
DOPC	Lipid in AS01 _E	AREXVY	RSV	0.5 mg
Host cell Proteins	Residual medium	AREXVY	RSV	≤2.0%
Phosphate Buffer	Buffer	AREXVY	RSV	4.4 mg sodium chloride 0.83 mg potassium dihydrogen phosphate 0.26 mg dipotassium phosphate 0.15 mg of disodium phosphate anhydrous
Polysorbate 80	Surfactant	AREXVY	RSV	0.18 mg
Salts, Mineral	Adjust tonicity	AREXVY	RSV	4.4 mg sodium chloride
Trehalose	Stabilizer	AREXVY	RSV	14.7 mg
2-Phenoxyethanol	Stabilizer	Adacel	Tdap	3.3 mg (0.6% v/v) (not as a preservative)
Aluminum Phosphate	Adjuvant	Adacel	Tdap	1.5 mg (0.33 mg aluminum)
Ammonium Sulfate	Protein Purifier	Adacel	Tdap	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Adacel	Tdap	Amount not specified in package insert
Dimethyl-beta-cyclodextrin	Medium Nutrient	Adacel	Tdap	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Adacel	Tdap	≤5 mcg
Glutaraldehyde	Inactivating Agent	Adacel	Tdap	<50 ng (residual)
Aluminum Hydroxide	Adjuvant	Boostrix	Tdap	≤0.3 mg aluminum
Bovine Casein	Medium Nutrient	Boostrix	Tdap	Amount not specified in package insert
Bovine Extract	Medium Nutrient	Boostrix	Tdap	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Boostrix	Tdap	≤100 mcg (residual)
Glutaraldehyde	Inactivating Agent	Boostrix	Tdap	Amount not specified in package insert
Polysorbate 80	Surfactant	Boostrix	Tdap	≤100 mcg (Tween 80)
Salts, Mineral	Adjust tonicity	Boostrix	Tdap	4.4 mg sodium chloride
Aluminum	Adjuvant	TDVax	Tetanus+Diphtheria	≤0.53mg
Ammonium Sulfate	Protein Purifier	TDVax	Tetanus+Diphtheria	Ingredient in purification
Bovine Extract	Stabilizer	TDVax	Tetanus+Diphtheria	Amount not specified in package insert
Formaldehyde	Inactivating Agent	TDVax	Tetanus+Diphtheria	<100 mcg
Thimerosal	Manufacturing Residue	TDVax	Tetanus+Diphtheria	≤0.3 mcg mercury (trace amounts)
Aluminum	Adjuvant	Tenivac	Tetanus+Diphtheria	0.33 mg
Ammonium Sulfate	Protein Purifier	Tenivac	Tetanus+Diphtheria	Ingredient in purification
Bovine, Casamino Acid	Stabilizer	Tenivac	Tetanus+Diphtheria	Amount not specified in package insert
Formaldehyde	Inactivating Agent	Tenivac	Tetanus+Diphtheria	≤5.0 mcg
Salts, Mineral	Adjust tonicity	Tenivac	Tetanus+Diphtheria	Sodium chloride – Amount not specified in package insert
Albumin, Bovine Serum	Stabilizer	Varivax	Varicella	Trace amounts
DNA	Residual Medium	Varivax	Varicella	Residual component of MRC-5 cells
Ethylenediaminetetraacetic acid (EDTA)	Preservative	Varivax	Varicella	Trace amounts
Gelatin, hydrolyzed	Stabilizer	Varivax	Varicella	12.5 mg
Monosodium L-glutamate	Stabilizer	Varivax	Varicella	0.5 mg
MRC-5	Manufacturing Residue	Varivax	Varicella	Residual component
Neomycin	Antimicrobial	Varivax	Varicella	Trace amounts
Phosphate Buffer	Buffer	Varivax	Varicella	0.08 mg potassium phosphate monobasic 0.45 mg sodium phosphate dibasic Sodium phosphate monobasic, trace amounts
Potassium Chloride	Buffer	Varivax	Varicella	0.08 mg
Salts, Mineral	Adjust tonicity	Varivax	Varicella	3.2 mg Sodium Chloride
Sucrose	Stabilizer	Varivax	Varicella	25 mg

Excipient	Purpose	Vaccine Name	Vaccine Type	Amount per 0.5 mL Dose (unless otherwise noted)
Albumin, Bovine	Stabilizer	Zostavax	Varicella Zoster	Trace amounts
DNA	Residual Medium	Zostavax	Varicella Zoster	Residual
Gelatin, Porcine, Hydrolyzed	Stabilizer	Zostavax	Varicella Zoster	15.58 mg/0.65 mL dose
Monosodium L-glutamate	Stabilizer	Zostavax	Varicella Zoster	0.62 mg/0.65 mL dose
MRC-5	Manufacturing Residue	Zostavax	Varicella Zoster	Residual
Neomycin	Antimicrobial	Zostavax	Varicella Zoster	Trace amounts
Phosphate Buffer	Buffer	Zostavax	Varicella Zoster	0.10 mg/0.65 mL dose potassium phosphate monobasic 0.57 mg/0.65 mL dose sodium phosphate monobasic
Potassium Chloride	Buffer	Zostavax	Varicella Zoster	0.10 mg/0.65 mL dose
Salts, Mineral	Adjust tonicity	Zostavax	Varicella Zoster	3.99 mg/0.65 mL dose sodium chloride
Sucrose	Stabilizer	Zostavax	Varicella Zoster	31.16 mg/0.65 mL dose
Amino Acid	Medium Nutrient	Shingrix	Zoster	Ingredient in growth medium
AS01B	Adjuvant	Shingrix	Zoster	Amount not specified in package insert
Cholesterol	Lipid	Shingrix	Zoster	0.25 mg
DNA	Residual Medium	Shingrix	Zoster	≤2.1 µg
DOPC	Lipid in AS01	Shingrix	Zoster	1 mg
Host cell Proteins	Residual Medium	Shingrix	Zoster	≤3.0%
Phosphate Buffer	Buffer	Shingrix	Zoster	0.54 mg potassium dihydrogen phosphate 0.160 mg sodium dihydrogen phosphate dihydrate 0.15 mg disodium phosphate anhydrous 0.116 mg dipotassium phosphate
Polysorbate 80	Surfactant	Shingrix	Zoster	0.08 mg
Salts, Mineral	Adjust tonicity	Shingrix	Zoster	4.385 mg sodium chloride
Sucrose	Stabilizer	Shingrix	Zoster	20 mg

This information is correct to the best of our knowledge. Please report inaccuracies to us at info@hopkinsvaccine.org.

This table was last updated on October 14, 2024 | © 2024 Institute for Vaccine Safety