

Alkaloids Corporation

Atracurium Impurities



ALKALOIDS CORPORATION, INDIA

S.No	Project	Batch No.	Chemical name	Common name	Mass	Proton	Carbon	IR	EP, Pharm	
1	Atracurium besylate API	ATM-III-Imp/R&D/1170918 Fraction -3	(1R,2S)-1-(3,4-dimethoxybenzyl)-2-(3-(5-(3-((R)-1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-3,4-dihydroisoquinolin-2(1H)-yl)propanoyloxy)pentyl)-3-oxopropyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium benzene-sulfonate	Atracurium Impurity A1 (trans-Mono quaternary)	Yes	Yes	Yes	Yes	Impurity A	
2		ATM-III-Imp/R&D/1170918 Fraction -2	(1R,2R)-1-(3,4-dimethoxybenzyl)-2-(3-(5-(3-((R)-1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-3,4-dihydroisoquinolin-2(1H)-yl)propanoyloxy)pentyl)-3-oxopropyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium benzene-sulfonate	Atracurium Impurity A2 (cis-Mono quaternary)	Yes	Yes	Yes	Yes		
3		ATM-II/R&D/0540218	pentane-1,5-diyl bis(3-(1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-3,4-dihydro isoquinolin-2(1H)-yl)propanoate) dioxalate [ATM-II-Oxalate]	[ATM-II-Oxalate]	Yes	Yes	Yes	Yes	Impurity-B	
4		ATM-III-Imp/R&D/1120918		(1R,2S)-2-(3-(5-(acryloyloxy) pentyl)-3-oxopropyl)-1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydro isoquinolinium benzene-sulfonate	Atracurium Impurity C1 (trans-Monoacrylate)	Yes	Yes	Yes	Yes	Impurity C
				(2R)-2-(3-(5-(acryloyloxy) pentyl)-3-oxopropyl)-1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydro isoquinolinium benzenesulphonate	Impurity C2 (Cis-Monoacrylate)					
5		ATM-III-Imp/R&D/1200918		(1R,2S)-1-(3,4-dimethoxybenzyl)-2-(3-(5-hydroxypentyl)-3-oxopropyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydro isoquinolinium benzene sulphonate	Atracurium Besylate Impurity D1	Yes	Yes	Yes	Yes	Impurity D
				(1R,2R)-1-(3,4-dimethoxybenzyl)-2-(3-(5-hydroxypentyl)-3-oxopropyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium benzene sulfonate	Atracurium Besylate Impurity D2 (cis-Quaternary Alcohol)					
6			ATM-III/R&D/1190918	3-((1R,2R)-1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydro isoquinolinium-2-yl) propanoate	Atracurium Impurity E (cis-Quaternary Acid)	NO	NO	NO	NO	Impurity E
7			ATM-III-Imp/R&D/1180918	1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2,2-dimethyl-1,2,3,4-tetrahydroisoquinolinium iodide	Atracurium EP Impurity F	Yes	Yes	Yes	Yes	Impurity F
8			ATM-III-Imp/R&D/1490619	1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinoline	R-Atracurium EP Impurity G (R-Laudanosine)	Yes	Yes	Yes	Yes	Impurity G
9			ATM-III-Imp/R&D/1100818	2,2'-(3,3'-(hexane-1,6-diylbis(oxy)) bis(3-oxopropane-3,1-diyl))bis(1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium)	Atracurium EP Impurity H Iodide (Mixture of Diastereomers)	Yes	Yes	Yes	Yes	Impurity H
10			ATM-III-Imp/R&D/1110818	2,2'-(3,3'-(3-methylpentane-1,5-diyl)bis(oxy)bis(3-oxopropane-3,1-diyl))bis(1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium) iodide	Atracurium EP Impurity I Iodide (Mixture of Diastereomers)	Yes	Yes	Yes	Yes	Impurity I
11			ATM-III-Imp/R&D/1160818	2,2'-[hexane-1,5-diylbis[oxy(3-oxopropane-1,3-diyl)]]bis[1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydro isoquinolinium].	Atracurium EP Impurity K Iodide (Mixture of Diastereomers)	Yes	Yes	Yes	Yes	Impurity K
12			Methyl benzene-sulfonate	Atracurium EP Impurity J	NO	NO	NO	NO	Impurity J	
13		ATM-III-R&D/1030718	Mixture of the cis-cis, cis-trans and trans-trans isomers 2,2'-[pentane-1,5-diylbis[oxy(3-oxopropane-1,3-diyl)]]bis[1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium] dibenzene sulfonate 2,2'-[pentane-1,5-diylbis[oxy(3-oxopropane-1,3-diyl)]]bis[1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium] dibenzene sulfonate 2,2'-[pentane-1,5-diylbis[oxy(3-oxopropane-1,3-diyl)]]bis[1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium] dibenzene sulfonate 2,2'-[pentane-1,5-diylbis[oxy(3-oxopropane-1,3-diyl)]]bis[1-(3,4-dimethoxybenzyl)-6,7-dimethoxy-2-methyl-1,2,3,4-tetrahydroisoquinolinium] dibenzene sulfonate	Atracurium besylate Std.	NO	NO	NO	NO	API	