

Appendix: Chemical names of ivabradine and its impurities and the degradation products

Ivabradine	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl] methylamino} propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one, hydrochloride
Impurity I	[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]methylamine
Impurity II	3-(3-(Methylamino)propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity III	3-(3- {[(3-Hydroxy-4-methoxybicyclo[4.2.0] octa-1,3,5-trien-7-yl)methyl] methylamino} propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity IV	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]amino} propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity V	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]methylamino} propyl)-1,3,4,5-tetrahydro-7-hydroxy-8-methoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity VI	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl] methylamino} propyl)-1,3,4,5-tetrahydro-8-hydroxy-7-methoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity VII	3-(3- {[(<i>7S</i>)-3,4-dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl] methylamino} propyl)-1-hydroxy-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity VIII	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]methylamino} propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-1,2-dione
Impurity IX	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl] methylamino} propyl)-1,3-dihydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity X	3-(3- {[(<i>7S</i>)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]methylamino- <i>N</i> -oxide} propyl)-1,3,4,5-tetrahydro-7,8-dimethoxy-2 <i>H</i> -3-benzazepin-2-one
Impurity XI	4,5-Dimethoxy-2-(6- {[(<i>7S</i>)-3,4-dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl)methyl]methylamino}-3-azahexyl)phenylacetic acid