

	Local anesthetics		
	amides		
TYPE	Articaine HCL	Bupivacaine HCL	Etidocaine HCL
Potency	1.5 L	< 4 L	4 L
Toxicity	1 L	< 4 L	2 L
Metabolism	In plasma (by plasma esterase) and liver (by hepatic microsomal enzymes)	In liver by amidases	
Excretion	5 - 10 % unchanged	16% unchanged	
Vasodilating properties	Equal to lidocaine	Greater than L,M,Prilo Less than procaine	Greater than L,M,Prilo Less than procaine
PK _a	7.8	8.1	7.7
Ph of plain solution	NA	4.5 - 6	4.5
PH OF vasoconstrictor- containing solution	4.4 TO 5.4	3 – 4.5	3 – 3.5
Onset of action	Articaine 1:200.000 2-3 min 1:100.000 1-2.5 min	Same L,M,P but usually longer onset time 6-10 min	1.5 - 3 min
Effective dental concentration	4% with 1:100.000 or 1:200.00 E	% 0.5	% 1.5
Half life	0.5 hour	2.7 hours	2.6 hours
MRD	7 mg / kg	1.3 mg / kg	8 mg / kg
Topical anesthetic action	No	No	No

	Local anesthetics		
	Esters		
TYPE	Articaine HCL	Bupivacaine HCL	Etidocaine HCL
Potency	1	7 to 8 procaine	
Toxicity	1	7 to 8 procaine	
Metabolism	Rapidly in Plasma by pseudocholinesterase	Plasma and liver	
Excretion	2% unchanged + 90%PAPA + 8 % diethylaminoethanol	Entirely hydrolyzed	
Vasodilating properties	Greatest vasodilating action among all	Yes	
PK _a	9.1	NA	
Ph of plain solution	5 to 6.5	NA	
PH OF vasoconstrictor-containing solution	3.5 to 5.5		
Onset of action	6 to 10	2 to 3 min	
Effective dental concentration	2% to 4%	%0.4	
Half life	6 min	NA	
MRD			6.6 mg/kg
Topical anesthetic action	No	No	It was useful when the amides were absolutely contraindicated OR when several amide local, anesthetics failed to provide clinically adequate anesthesia 0.4% propoxycaine + 2% procaine with 1:20.000 levondefrin or with 1:30.000 norepinephrine provided 40min of pulpal a . and 2 - 3 hours of soft tissue a .
PS	Provide no pulpal anesthesia 15 - 30 min of soft tissue a Clean surgical field is difficult IA injection to aid in breaking arteriospasm Incidence of Allergic reaction Toxicity in patients with hepatic dysfunction Slow clinical onset of action	Combined with procaine in solution to provide more rapid onset of action and more profound and longer - lasting anesthesia than could be obtained with procaine alone Not available alone because of higher toxicity	