## **3** Science. Applied to Life.™

# Local Anaesthetics

**Predictable • Profound • Performance** 

# Competence you can trust

## **3M<sup>™</sup> local anaesthetics** A better choice for patients

With 3M local anaesthetics, you can rely on an effective and well-tolerated compound that has proven itself millions of times in dental practice. Behind it stands more than 50 years of experience in the development of local anaesthetics – leading-edge know-how, which you and your patients can trust. 3M has been awarded the most innovative dental company\* ten times in a row and is dedicated to the highest possible standards.

\* The Anaheim Group, March 2015

## How is the high quality of 3M local anaesthetics checked and safeguarded?



We bank on a double quality assurance: First, the washed and siliconised cartridges are filled by means of a laser-controlled process. This step guarantees a particularly high degree of freedom from bubbles. As an additional step, all cartridges pass through an optoelectronic control system to check them for visible particles in the solution, absence of bubbles, potential glass defects, correct position and size of stopper. Cartridges that do not meet the predetermined parameters are separated out and discarded. By this means, cartridges with air bubbles, for example, are prevented from being sold.

## Smart packaging safe handling

Even the packaging has been continuously refined. With a series of well-thought-out features, it is now more convenient than ever:

- Cylindrical glass ampoules with inner silicone coating for a smooth, gentle and controlled injection
- Safety foil prevents splintering
- Packaging in a stable metal box with a padded interior for safe transport, easy removal and tidy storage
- Colour-coded aluminium caps reduced chance of mix-ups!





## Recommended injection volumes-Dr. Stanley Malamed

#### **Cartridge Size**

All 3M local anaesthetics come in a 1.8ml size glass cartridge (volume of injectable solution is 1.7ml) - an optimal amount that conforms to clinical dosage recommendations, as per the tables below:

Recommended Volumes for Injection Techniques:*	Technique	Volumes (ml)
Maxillary Injection Techniques	Buccal Infiltration	0.6
	Palatal Infiltration	0.2 to 0.3
Mandibular Injection Techniques	Mandibular Nerve Block	1.5
	Buccal Infiltration	0.6
	Long Buccal Nerve Block	0.3
	Intraligamental	0.3

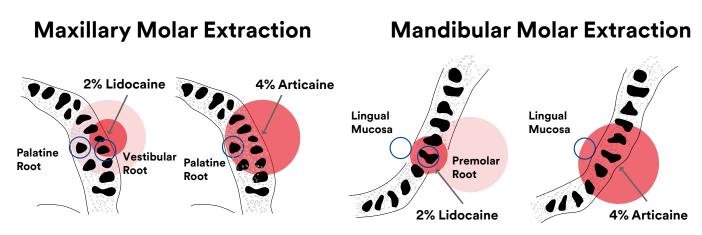
\*Malamed SF, 2004. Handbook of local anaesthesia 5th Ed. (pages 224, 253 & 258) - The smallest possible volume of solution that will lead to effective anaesthesia should be used. The maximum recommended dosage should not be exceeded. Please refer to the local anaesthetic product datasheet for dosage, warnings and precautions.

Local anaesthetic agents - Physico-chemical and pharmacological properties

	Articaine	Lidocaine	Mepivacaine
Lipid Solubility	high	medium	medium
Protein-Binding-Rate	94 %	77 %	78 %
Rel. Potency*	5	4	4
Rel. Toxicity*	1.5	2	2
Ratio - Potency:Toxicity	3.3	2	2
Elimination Half Time	20 min	90 min	114 min

\* Procaine = 1

# Clinical efficacy of local anaesthetic solutions and concentrations



Reference: Pilz G: Klinische Vergleichsstudie zur Wirkung von Articain and Lidocain. In Frenkel G (Hrsg.): Symposium 20 Jahre Ultracain® Aktuelles Wissen Hoechst 1998

### Ubistesin<sup>™</sup> 1/200,000

for routine procedures

- 4% articaine and epinephrine (adrenaline) 1/200,000 as a vasoconstrictor
- Indications: Infiltration and nerve-block anaesthesia for routine-type interventions
- Contains only Sulphite as a stabiliser
- Appropriate for adults and children aged 4 and over
- Average duration of action:
  - Pulpal anaesthesia: approx. 45 minutes
  - Soft-tissue anaesthesia: 120–240 minutes
  - Onset period 1-3 minutes

#### Ubistesin<sup>™</sup> Forte 1/100,000

for procedures requiring prolonged anaesthesia

- 4% articaine and epinephrine (adrenaline) 1/100,000 as a vasoconstrictor
- Indications: Infiltration and nerve-block anaesthesia for complex interventions requiring prolonged anaesthesia
- Contains only Sulphite as a stabiliser
- Appropriate for adults and children aged 4 and over
- Average duration of action:
- Pulpal anaesthesia: approx. 75 minutes
- Soft-tissue anaesthesia: > 240 minutes
- Onset period 1-3 minutes



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Code: 15211 -
50 cartridges/tin
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### Xylestesin<sup>™</sup>-A

#### for routine type interventions

- 2% lidocaine and epinephrine (adrenaline) 1/80,000
- Indications: Infiltration and nerve-block anaesthesia for routine-type interventions
- Contains only Sulphite as a stabiliser
- Appropriate for adults and children aged 4 and over
- Average duration of action:
  - Pulpal anaesthesia: approx. 30–60 minutes
  - Soft-tissue anaesthesia: 120–180 minutes
  - Onset period 1-3 minutes



Code: 10811 -50 cartridges/tin

### Pluraject<sup>™</sup> 2 Aspiration Syringe

- Stainless steel syringe rack
- Syringe rack with flip mechanism; the ampoule holder is flipped aside, and only the ampoule itself is exchanged
- Inch thread
- Aspiration: Manual aspiration by means of three extending aspiration hooks



Code: 76012 -1 syringe/box



Code: 15045-50 cartridges/tin

#### Local anaesthetics

Summary of Product Characteristics

#### Ubistesin & Ubistesin Forte.

Contraindications: Due to the local anaesthetic ingredient articaine, do not use in the event of:

- known allergy or hypersensitivity to local anaesthetics of the amide type;
- severe impairment of the nerve impulses and conduction system of the heart (e.g. grade II and III AV block, pronounced bradycardia);
- acutely decompensated cardiac insufficiency;
- severe hypotension;
- patients who are known to have a deficiency in plasma cholinesterase activity;
- haemorrhagic diatheses, particularly with nerve-block anaesthesia. Do not inject into inflamed or infected areas.
- Precautions: Use with particular caution in the event of:
- severe impairment to renal function;
- angina pectoris (see Dosage and Administration and Contraindications);
- arteriosclerosis;
- considerably impaired blood coagulation (see Interactions);
- thyrotoxicosis;
- narrow-angle glaucoma; 4
- diabetes mellitus;
- lung diseases, particularly allergic asthma;
- pheochromocytoma.

#### Xylestesin-A.

Contraindications: Due to the active substance lidocaine, Xylestesin-A must not be used in the event of known allergy or hypersensitivity to local anaesthetics of the amide type, severe, uncontrolled or untreated excitation and conduction disorders of the heart (e.g. grade II and III AV block, pronounced bradycardia), acutely decompensated heart failure, severe hypotension page 5 of 17 Due to the content of adrenaline as a vasoconstrictor admixture, Xylestesin-A must not be used in the event of Heart diseases such as:

- unstable angina pectoris,
- recent myocardial infarction,
- recent coronary artery bypass surgery,
- refractory arrhythmia and paroxysmal tachycardia or high-frequency, continuous arrhythmia,
- untreated or uncontrolled severe hypertension,
- untreated or uncontrolled congestive heart failure, Concomitant treatment with monoamine oxidase (MAO) inhibitors or tricyclic antidepressants (see section 4.5). - Xylestesin-A is not allowed to be used in acra of extremities. Due to the content of sulphite as excipient, Xylestesin-A must not be used in the event of - allergy or hypersensitivity to sulphite, - severe bronchial asthma. Xylestesin-A can provoke acute allergic reactions with anaphylactic symptoms (e.g. bronchospasm).

Precautions: Due to the content of adrenaline as a vasoconstrictor admixture, Xylestesin-A must not be used in the event of Heart diseases such as:

- unstable angina pectoris,
- recent myocardial infarction,
- recent coronary artery bypass surgery,
- refractory arrhythmia and paroxysmal tachycardia or high-frequency, continuous arrhythmia,
- untreated or uncontrolled severe hypertension,
- untreated or uncontrolled congestive heart failure, Concomitant treatment with monoamine oxidase (MAO) inhibitors or tricyclic antidepressants (see section 4.5). Xylestesin-A is not allowed to be used in acra of extremities.



**3M Oral Care** 

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Prescription Medicine. Ubistesin contains articaine hydrochloride and epinephrine (adrenaline). Xylestesin-A contains lidocaine hydrochloride and epinephrine. Local anaesthetic for dentistry. Refer to data sheet for special warnings and precautions for use. 3M, Pluraject, Ubistesin and Xylestesin are trademarks of 3M Company. © 3M 2016. All rights reserved. TAPS Approval No: NA 8308