

SOPIRA®

Product Information



SOPIRA®

Your local anaesthesia supplier.

Giving a hand to oral health.



KULZER
MITSUI CHEMICALS GROUP

Your needs set our standards.

SOPIRA® – Systematic safety concept for local anaesthesia.

Each day at your surgery, your success is measured on the basis of the professional and personalised treatment of your patients – and whether or not your anaesthesia is effective. For this reason, you need a system on which you can always rely. Our SOPIRA brand stands for a reliable, all-in-one local anaesthesia solution. By choosing SOPIRA, you will be able to accommodate all the necessary indications. There's no easier way. Our long-standing expertise in this field also gives you the sense of confidence you need for the treatment.

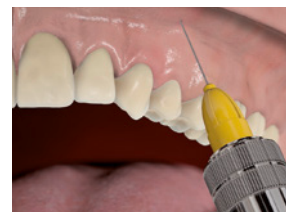
Our experts handle your local anaesthesia the right way.



All-round safety – With the right anaesthesia for every indication.

SOPIRA® is the expert in local anaesthesia:
Convenience for you. Comfort for your patients.

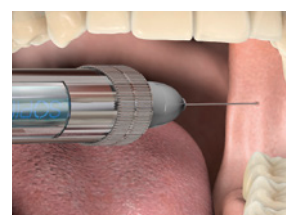
We make precision, functionality and reliability top priority so you can fully focus all your attention on the actual treatment. By combining the ergonomic handling of our dental syringes with an aesthetic design, we have been setting standards from the beginning on. SOPIRA accommodates a variety of applications and anaesthesia methods. The comprehensive product portfolio provides reliable solutions that allow you to master any major challenge when it comes to local anaesthesia.



Infiltrative/intraseptal

SOPIRA – a single system for all relevant indications.

Infiltration anaesthesia is the most frequent method used when treating the maxilla. The anaesthetic spreads by diffusing throughout the surrounding tissue until it has made its way to the terminal nerve fibres. However, this anaesthesia method cannot achieve adequate anaesthetisation of the mandibular posterior teeth due to the higher bone density of the mandible. Usually the inferior alveolar nerve block is the method of choice for such cases. The anaesthetic solution is injected near the main nerve trunk and blocks the transmission of pain impulses from the whole innervation area distally to the point of injection.



Mandibular

Everything needed for a primary method:
The intraligamentary anaesthesia.

Intraligamentary anaesthesia (ILA) offers patients a very comfortable alternative. By injecting the active ingredient directly into the periodontal ligament, it is possible to achieve an immediate and complete anaesthetisation of the single tooth. Last but not least, our specially cut needles ensure this method provides a safe, reliable analgesia for numerous indications. In most cases, a combination of different anaesthesia techniques is no longer necessary. Thus, ILA meets most of the requirements of a primary method.



Intraligamentary

The right needle for any indication.

SOPIRA® Carpule needles: Gentle injection thanks to workmanship of the most outstanding quality.

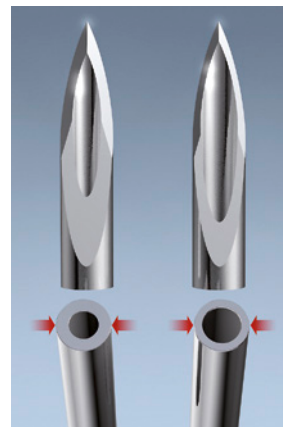
The best injection is the one your patient doesn't feel. Our tissue-friendly needles are characterised by first-class steel and an innovative cut. They offer both dentist and patient a pleasant and comfortable treatment under ideal conditions.

Benefits at a glance:

- Extensive range of dental needles for various dental anaesthesia techniques.
- Less initial pain due to three-faceted cut.
- Silicone coating ensures optimal gliding through the tissue.
- Safe handling thanks to high elasticity.
- A variety of models to accommodate your surgery's every need: exceptionally thin-walled (Free Flow), safely packed (blistered) or in an extra-short bevel.
- Fast and sure identification of the various needles with the new rainbow colour-coding system.
- Compatible with all common dental syringes.

Special needles for intraligamentary anaesthesia to reduce risk of injury.

The unique SOPIRA Carpule needles are cut extra-short specifically for intraligamentary anaesthesia. This prevents bending of the needle in the desmodontal space and reduces the risk of injury. In addition, the triple-faceted cut minimises the initial pain of the injection.



Left picture: SOPIRA Carpule needles (from left to right): long bevel, Free Flow, short bevel
Right picture: Free Flow needle with larger interior diameter

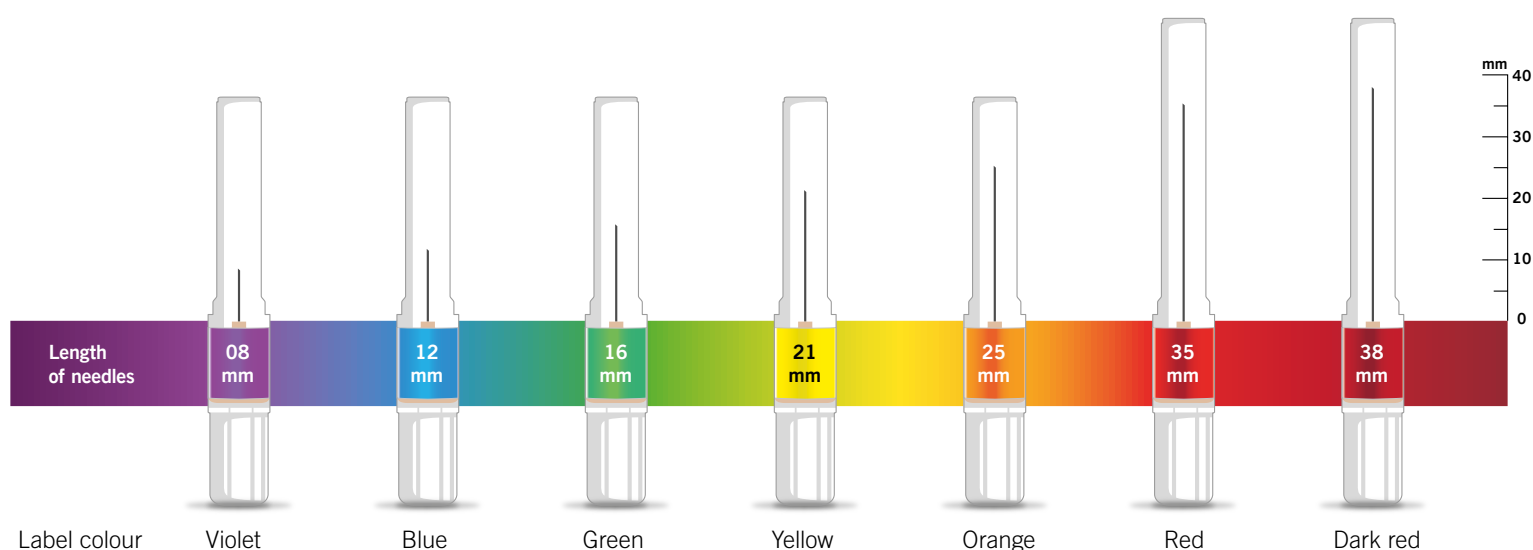
Intuitive selection thanks to colour-coded needle length.

Colour-coded labelling for better differentiation.

The new rainbow colour-coding makes it easier for you to select the right CarpuLe needles and improves safety during use. There was no standardised system on the market until now. The easy-to-identify coloured banderoles from **Kulzer** ensure users can, with just a quick glance, select the right needle ranging from 8 mm to 38 mm in length.

Benefits at a glance:

- Rainbow scale for a better overall picture.
- More assurance in selecting the right needle.



The SOPIRA colour-coding is analogous to the wavelengths of visible light and its colour spectrum: The longer the wavelength of the labelling colour, the longer the injection needle.

Needles with the special short bevel for intraligamentary anaesthesia have a label with a narrower stripe of the respective colour.

Long bevel needle (left) and short bevel needle with narrower coloured stripe on the label (right)

Minimised stress thanks to pinpointed single-tooth anaesthesia.

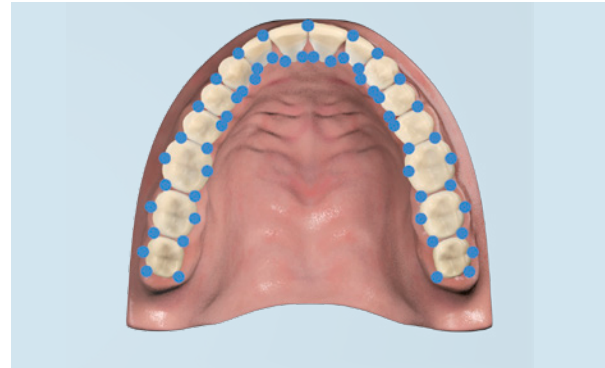
Unlike nerve block and infiltration anaesthesia, intraligamentary anaesthesia (ILA) achieves an immediate and complete anaesthetising of the single tooth by injecting the local anaesthetic directly into the periodontal ligament of the tooth that is to be anaesthetised. The pain of injection is minimised and the cardiovascular system is not subjected to unnecessary stress.

The intraligamentary injection technique:

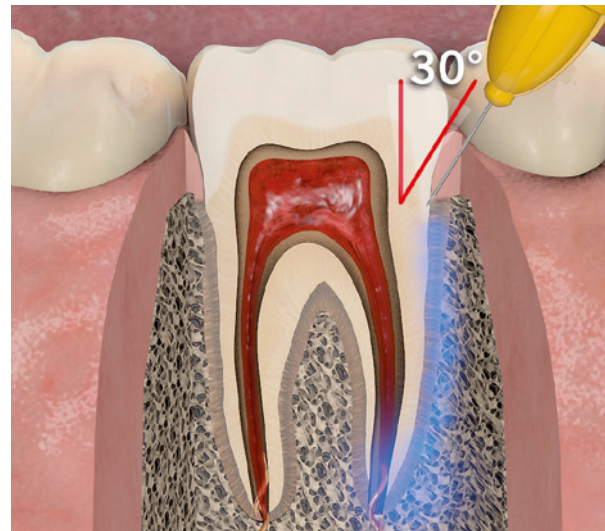
The injection is performed using an ILA needle with a particularly short bevel, inserted into the desmodontal space at an angle between 10° and 30°. Syringes (e.g. Citoject) developed specifically for intraligamentary anaesthesia make it possible to overcome the interstitial resistance in the dense desmodontal tissue. For each root of the tooth being treated, only 0.2 ml of anaesthetic is administered very slowly (for at least 20 seconds). The anaesthetic quickly spreads intraosseously throughout the fenestrations of the lamina cribriformis and reaches the pulp in about 30 seconds (Smith and Walton, 1983; Tagger *et al.*, 1994). The anaesthetising effect begins with hardly any latency and lasts for an average of 30 minutes (Kaufman *et al.*, 1984).

Possibilities for using intraligamentary anaesthesia:

- Single tooth treatment (fillings, crown preparation).
- Endodontic treatment (including vital extirpations).
- Differential diagnosis of uncertain pulp-related problems.
- Extractions and osteotomies (Langbein *et al.*, 2012).
- Risk patients with cardiac limitations (Garfunkel *et al.*, 1985) and patients with haemorrhagic diathesis (Stoll and Bührmann 1983, Moore *et al.*, 2011).
- When treating children: mitigating anxiety potential ("needle-phobia") (Einwag, 1982), avoiding post-injection trauma.



Injection points in maxilla and mandible



Intraligamentary injection: injection angle 10–30°

SOPIRA® for intraligamentary anaesthesia:

Your alternative when infiltration and conduction anaesthesia reach their limitations.

Benefits of intraligamentary anaesthesia at a glance:

- No unreasonably long period of anaesthesia lasting several hours, which would have an unnecessary impact on articulation, mastication and the general condition of the patient (Dirnbacher and Weber, 2006).
- Improved comfort for the patient: no feeling of numbness in the lips, tongue and cheeks.
- Minimum stress on cardiovascular circulation thanks to considerably smaller dosage of anaesthetic.
- Lower rate of anaesthesia failure (Weber, 2005).
- Possible to treat teeth in different quadrants in one sitting.
- Prevents acute vascular complications resulting from unintentional intravascular injections that can occur regardless of aspiration (Kämmerer *et al.*, 2010). Conduction anaesthesia is contraindicated for patients with haemorrhagic diathesis (Schwenzer and Ehrenfeld, 2000).
- Minimal waiting period between injection and treatment (approx. 30 seconds) with good anaesthetic depth and brief duration of anaesthesia (approx. 30 minutes).

Contraindications and limitations of intraligamentary anaesthesia (Glockmann and Taubenheim, 2010):

- Patients with risk of endocarditis due to danger of bacteraemia.
- More extensive dento-alveolar surgical procedures as well as any treatments over a larger area and requiring more time.

Dirnbacher T, Weber M. Dispositionsfähigkeit der Truppe nach zahnärztlicher Lokalanästhesie. Wehrmed Wehrpharm 2006; 2: 82–84 und 4: 20–26 / Einwag J. Die intraligamentäre Anästhesie im Kindes- und Jugendalter. Dtsch Zahnärztl Z 1982; 37: 874–876 / Garfunkel AA, Kaufman E, Galili D. Intraligamentary anesthesia (transligamentary anesthesia) for health-compromised patients. Gerodontology 1985; 1: 63–64 / Glockmann E, Taubenheim L. Minimalinvasive Schmerzausschaltung – Intraligamentäre Anästhesie. Zahnärztlicher Fach-Verlag, Herne, 2010 / Kämmerer PW, Shabazfar N, Al-Nawas B. Zahnextraktionen unter intraligamentärer Anästhesie. Dent Implantol 2010; 14 (5): 306–313 / Kaufman E, Weinstein P, Milgrom P. Difficulties in achieving local anesthesia. J Am Dent Assoc 1984; 108: 205–208 / Langbein A, Taubenheim L, Benz W. Die intraligamentäre Anästhesie – primäre Methode der Schmerzausschaltung? ZWR 2012; 121 (07/08): 334–342 / Moore P, Cuddy M, Cooke M, Sokolowski C., Periodontal ligament and intraosseous anesthetic injection techniques. JADA 2011; 142 (9): 13S–18S / Schwenzer, N, Ehrenfeld, M. Zahn-Mund-Kiefer-Heilkunde, 3 Bde., Bd. 1, Allgemeine Chirurgie. Thieme-Verlag, Stuttgart, 2000 / Smith GN, Walton RE., Periodontal ligament injection: Distribution of injected solutions., Oral Surg Oral med Oral Pathol 1983; 55: 232–238 / Stoll P, Bührmann K. Die intraligamentäre Anästhesie bei der Zahnextraktion von Patienten mit hämorrhagischer Diathese. ZWR Zahnärztl Welt 1983; 93: 54–55 / Tagger M, Tagger E, Sarnat H., Periodontal ligament injection spread of the solution in the dog., J Endod 1994; 92: 54–55 / Weber M., Reduzierung der unerwünschten Nebeneffekte bei der zahnärztlichen Lokalanästhesie unter besonderer Berücksichtigung der Erfordernisse für endodontische Maßnahmen, Diss, Jena, 2005

SOPIRA® Citoject syringe

For intraligamentary anaesthesia injections with pinpoint precision.



SOPIRA Citoject makes intraligamentary injections even easier for you and more comfortable for your patients. They also have an impressively innovative design available in stainless steel or light alloy.

- Well-balanced weighting for stable handling and outstanding working precision.
- The integrated plastic sleeve provides for more safety.
- The stainless steel models provide for unlimited cleaning and sterilisation along with all other stainless steel instruments used in your surgery.
- The ultimate in quality and durability thanks to one-year warranty on your Citoject products.
- Unparalleled control for a gentle injection: only 0.06 ml anaesthetic per press of the lever.
- Available in stainless steel or light alloy, with straight or angled head piece, for 1.8 ml or 2.2 ml glass cartridges.

Choose from our range of different sets or put together your own custom model in combination with our accessories.

By choosing SOPIRA Citoject, you will be getting the best-selling syringe available, designed specifically for intraligamentary anaesthesia.

Indication: Intraligamentary anaesthesia

SOPIRA – Citoject sets for an all-in-one syringe solution.

Adapted to meet key market standards, SOPIRA gives you complete syringe sets in various designs. Select the appropriate set from our different models or select from the accessories to put together your ideal model.



- **SOPIRA Citoject set, light alloy (pointed plunger)**
For 1.8ml glass cartridges
- **SOPIRA Citoject set, light alloy (flat plunger)**
For 1.8ml glass cartridges
- **SOPIRA Citoject set, stainless steel (pointed plunger)**
For 1.8ml glass cartridges

The hand and head pieces are available in light alloy or stainless steel. The light alloy model weighs much less, making for ideal handling. The stainless steel syringe can be easily autoclaved multiple times with the other stainless steel instruments used in the surgery.



The ideal complement: the special SOPIRA Carpule needles in short bevel design.

Reap all of the benefits of intraligamentary anaesthesia with our all-in-one solution. For this purpose, we offer you a one-of-a-kind concept for dental injection needles. The short bevel SOPIRA Citoject and SOPIRA Carpule needles match each other perfectly.

- Extra-short bevel needles prevent the bending of the needle tip in the desmodontal space, thus minimising the risk of injury.
- Less initial pain due to three-faceted cut.
- Silicone coating ensures optimal gliding through the tissue.
- The new rainbow colour-coding system lets you quickly and reliably identify the various needles.

The short bevel SOPIRA Carpule needles are also available in the following types:



- **Free Flow:** With an extra-thin wall and larger interior diameter.
- **In blister packaging:** For even better safety, especially during surgery.
- ▶ **All ILA needles are available in 30G 12 mm and 30G 16 mm versions.**

SOPIRA® syringe

Precision for infiltration and conduction anaesthesia.



SOPIRA Ject syringe

Our solution for convenient conduction and infiltration anaesthesia: ergonomic design for secure holding and additional sideways-opening cartridge holder for high-precision administration of local anaesthetic.

- Cylinder cartridge syringe for conduction and infiltration anaesthesia.
- Made of premium-quality stainless steel for extreme toughness (long-lasting).
- Impressively reliable handling thanks to ergonomic, tried-and-tested design.
- Improved safety thanks to manual aspiration option with three extendible aspiration hooks and self-aspiration.

Indication: infiltrative, intraseptal, mandibular



SOPIRA Ject Vario syringe

To ensure you are perfectly prepared for every procedure, SOPIRA Ject Vario syringes are available with several separate cartridge holders that you can conveniently have ready before each surgical procedure.

Indication: infiltrative, intraseptal, mandibular

SOPIRA Ject Vario cylinder cartridge holder

The extra individual cartridge holders for SOPIRA Ject Vario syringes ensure you are perfectly prepared for any situation.



SOPIRA Carpulse syringe (aspirating/non-aspirating)

The solid SOPIRA Carpulse syringe can be used in a variety of ways and offers you tried-and-tested stability as well as reliable handling.

- Cylinder cartridge syringe for conduction and infiltration anaesthesia.
- Double-ring design for stable holding.
- Sterilisable.
- Available as non-aspirating syringe for application of ointments and pastes or aspirating syringe with double ring detent for active aspiration.

Indication: infiltrative, intraseptal, mandibular

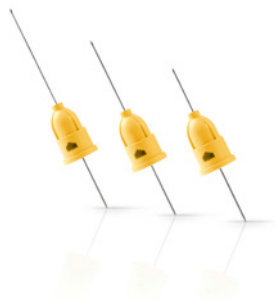
► Available in Aspirating and Non-Aspirating models.

SOPIRA® Carpule needles

The ideal complement for all SOPIRA syringes.

SOPIRA Carpule needles

- Less initial pain due to three-faceted cut.
- Silicone coating ensures optimal gliding through the tissue.
- High elasticity ensures stable handling even with very long needles.
- The new colour-coding system for quick and reliable identification of the various needles.



Infiltrative

27G 25mm
30G 12mm
30G 16mm
30G 21mm
30G 25mm

Intraseptal

27G 08mm

Mandibular

27G 38mm

SOPIRA Carpule Free Flow needles

- Interior diameter as much as 50 % larger thanks to extra-thin walls.
- Low injection resistance for smoother handling.
- More comfortable for patients because the injection solution penetrates in a way that is even gentler on tissue.



Infiltrative

27G 25mm
30G 25mm

Intraseptal

–

Mandibular

27G 38mm

SOPIRA Carpule needles, blistered

- Individually sealed needles for even better safety, especially during surgery.



Infiltrative

27G 25mm
30G 16mm
30G 21mm
30G 25mm

Intraseptal

27G 08mm

Mandibular

27G 38mm

Contact in Germany
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