



Manual

Ionic-Pulser[®] PRO3



Detailed instruction manual for
preparation of colloidal silver solution



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Dear customer,

you have purchased a branded device developed in cooperation with professional users. In **1997**, the former Medicion GmbH was the first company in German-speaking countries to promote colloidal silver. Authors work with our devices, and many silver solutions, which are available through mail order and pharmacies, are produced by the Ionic-Pulser® system.

Ionic-Pulser® is a trademark registered in the European Patent Office and protected throughout Europe. *Attention, similar sounding designations have nothing in common with our original devices!* These devices also operate on the principle of electrolysis, but not in association with the Ionic-Pulser® system developed by Wolfgang Jenkner which allows accurate silver releases.

Suitable water types

A pure silver solution can only be made with highly demineralised (distilled) water. The purer the water the longer and more difficult the process. Therefore, many vendors of conventional devices recommend the additional usage of salt, mineral water, or tap water. Please ignore such recommendations! By doing so, silver salts are produced during electrolysis (with every device) which develop undesirable effects and can be deposited easier due to their larger particles (a single salt granule is already sufficient).

Therefore, **do not use salt** or similar - the Ionic-Pulser® does not require any water additives!

The preparation can also be done with cold water but with hot water a much better quality can be achieved.

For optimal results we recommend using hot distilled water *aquaionic®*.

Reduction of deposits

In order to reduce black deposits in the production container, you should not use ultrapure water such as Aqua bidest. The production process should be interrupted briefly after 15-30 minutes to wipe off the silver electrodes. For a better dispersion of the silver particles, stir occasionally with a non-metallic object (the earliest 15 minutes after start of production). Do not use metal or plastic containers for the production. Tall glass containers with a volume of 0.1 - 0.25 litres are best suited. Normal water glasses are preferred to heat-resistant glasses as the silver particles on the glass walls can deposit less strongly here.

Please note that the silver clusters continue to change during and after the production process (especially in hot water) to reach their optimal size and quantity.

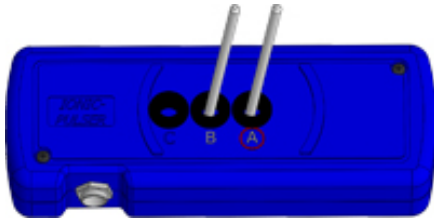
Concentration & silver release

The silver concentration is given in parts per million, abbreviated ppm, and describes the amount of silver in water. One ppm is equivalent to 1 milligram of silver per litre of water (**mg/l**). Due to adhesion of the silver to

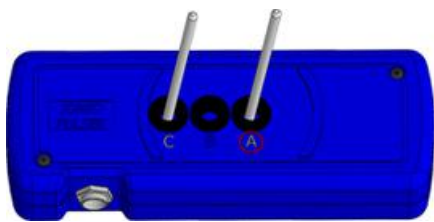
glass and electrode surfaces as well as electrochemical processes the silver concentration is always lower than the silver release.

The **Ionic-Pulser**[®] compensates changes in temperature, conductivity, the quality of the water used and the electrode surface. The silver release is the same for each type of water and proportional to the time of production. To double the time means to double the silver release. The production time for the desired silver release can be determined according to the table.*

Production



The **small electrode distance** (A-B) leads to a slightly faster production process.



The **recommended large electrode distance** (A-C) leads to a slower production process creating a **better quality**, since bridging between the electrodes are excluded.

Attention: The labeled anode socket (A) must **always** be equipped with an electrode!

The silver electrodes must be inserted **obliquely** into the sockets. With little sensitivity they can be inserted automatically at the correct angle.



1. Boil distilled water (demineralised) in a suitable container, allow to cool for about 3 minutes and then pour into a **glass**. Do not continue to heat!

Insert silver electrodes into the appropriate sockets on the underside of the device. Put the device on the glass.

Important: The electrodes must be completely covered with water (0.5 - 1 cm below the edge of the glass).

2. Connect the cable for the power supply unit to the device.
3. Plug the power supply unit into a properly installed (100-240 volts) socket - the red power indicator will light up. The sensor on the device (red indicator light) only reacts when the silver electrodes are immersed in the water. To stop the production, the device must be removed from the glass. The time depends on the desired silver release (see table).

Determining the silver release

The value in the bracket applies to the large electrode distance A-C.

Silver release	Time at 200 ml	Time at 250 ml
10 mg/l (ppm)	6 (9) minutes	8 (11) minutes
20 mg/l (ppm)	12 (15) minutes	15 (18) minutes
25 mg/l (ppm)	15 (18) minutes	19 (22) minutes
30 mg/l (ppm)	18 (21) minutes	23 (26) minutes
40 mg/l (ppm)	24 (27) minutes	30 (33) minutes
50 mg/l (ppm)	30 (33) minutes	38 (41) minutes
75 mg/l (ppm)	45 (48) minutes	56 (59) minutes
100 mg/l (ppm)	60 (63) minutes	75 (78) minutes

* If bidistilled water is used, the specified production time must be extended by 5 minutes.

Do not heat the silver solution during and after the process!

At low concentrations, colloidal silver is colourless and tasteless. At higher values, a discolouration may occur. The higher the concentration, the more intense the metallic-bitter taste, regardless of the colour or quality of the silver solution.

Recommended concentration for nearly all applications:

25 ppm or 50 ppm (even more effective).

Optimal production: drinking glass with 200 ml (250 ml)

**Production time: 25 ppm = 15 min (19 min at 250 ml)
50 ppm = 30 min (38 min at 250 ml)**

Colour of silver solution

Higher concentrations of silver can stain the water (yellow/brown).

This colour shows high purity of the water used, but is not a measure of the concentration. Even with the same production time, each solution can discolour differently. At higher concentrations, a black coating sometimes forms on the electrodes and on the bottom of the glass. At low concentrations or short production time, these particles are also present in the same ratio, but hardly visible.

Milky white/gray discolouration is caused by contamination or the use of tap or mineral water. ***Do not drink!***

Measurement of concentration

Please note: With conductivity meters (TDS meters) it is possible to determine real solutions such as saline solutions, but **not** the concentration of metal dispersions, e.g. colloidal silver (even if the TDS meter is calibrated in ppm). The values given in our table were determined and confirmed by means of complex laboratory tests.

Storage of colloidal silver

The finished silver solution can be used for several months, but gradually diminishes in its effect. Colloidal silver with a large amount of positively charged ions is particularly effective and should therefore be used fresh.

In order to keep the silver solution in its optimum condition for a long period of time, the following must be observed:

Do not store in plastic or metal containers, store in dark glass bottles.

Do not place in electromagnetic fields (next to electric stove, TV, stereo, etc.).

Do not refrigerate, store in a cool place.

Care and maintenance of the device

The generator is maintenance free. Clean with a damp cloth when the power supply is unplugged.

Occasionally remove deposits between the sockets.

Care and replacement of silver electrodes

Wipe the silver electrodes vigorously with kitchen paper or cloth after each operation. Do not use silver cleaner or scourer! Always insert the electrodes with the same end. If the electrodes have reached the diameter of a pencil lead and could break, it is time to replace them. A pair of silver electrodes is enough to produce about 400 litres of 10 ppm or 150 litres of 25 ppm colloidal silver.

Beware of replacement silver electrodes!

Original electrodes are chamfered to a certain angle, to avoid damage to the sockets. Our former standard size of 2.7 (2.5) x 82 mm has been copied several times by other manufacturers. Imitations are offered as original or universal electrodes. These products rarely match the high degree of purity and can lead to a loss of warranty if the sockets are damaged.

Accurate silver release with the best quality can only be achieved with original electrodes!

Trouble-shooting

- **Control lamp on the power supply unit does not light up**
Main plug has no contact, house fuse has triggered.
- **Indicator light on the device does not light up**
The silver electrodes or power supply unit are not plugged in properly, the silver electrodes are not immersed in the water.
- **Silver solution has discolouration at same production time**
Another type of water or water temperature was used, the electrodes were cleaned in a different way, the production was carried out under different lighting conditions, there are small amounts of detergent or grease in the production container.
- **Bubbles only rise at one electrode - only one electrode forms a silver cloud - only one electrode turns black**
This is completely normal during the electrolysis process.
- **White or gray haze of water**
Mineral water or tap water was used or salt added. Use distilled or demineralized water. Do not add any water additives.

Safety instructions

The device may only be operated with the original 30 Volt Ionic-Pulser® power supply unit. Never immerse the device in water. Therefore, use containers that are much smaller in diameter than the Ionic-Pulser®. People with pacemakers should avoid direct contact with the electrodes or leave the operation to another person. Do not associate the active electrodes with the mucosa, such as the "tongue test" for batteries. Do not operate on conductive surfaces (metal sinks, hobs, etc.). Never place the plugged device on a wet surface. Do not operate the device unattended. After completing the process unplug the power supply unit. Keep out of reach of children.

Pure colloidal silver can only be made with demineralized or distilled water.

When using other types of water, including household osmosis devices, undesirable chemical compounds can be produced. The user is solely responsible for the quality and purity. Likewise, the scope of application is up to you.



Disposal

Do not dispose the device with normal household waste. Information about environmental disposal is provided by the responsible department of your municipality.

Customer service

Before you send a device to us, check whether you can fix the fault yourself according to the information "Trouble-shooting" or call us.

Important: Always send in the power supply unit. Defective power supplies are replaced.

Non-free repair shipments will not be accepted.

Warranty repairs only on presentation of proof of purchase.

24 months warranty from date of invoice for private customers.

Scope of delivery

1x electrolysis device Ionic-Pulser®, model PRO 3 (5-58 volts DC)

1x power supply unit 30 volts for Ionic-Pulser®, for connection to 100-240 volts mains voltage

1x 2 pieces of silver electrodes 3 x 82 mm, purity over 99.99%

1x storage tube for electrodes

1x user manual

1x storage case

Declaration of Conformity

Manufacturer: Medionic GmbH & Co. KG
Großbrösern 1
02627 Radibor
Germany

Hereby the manufacturer declares that the devices comply with the following directives, standards and regulations:

EMV guideline 2004/108/EG

EN 61000-6-3: 2007

EN 61000-6-1: 2007

The devices were manufactured according to the RoHS guidelines 2001/65 / EU.

The declaration applies to the following products marked with **CE**

Designation **Ionic-Pulser®Standard S**

Designation **Ionic-Pulser®PRO**

Designation **Ionic-Pulser®PRO 3**

Radibor, 1st September 2018



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