

Sun Medisys Inc.

An ISO 9001:2015, ISO 13485:2016, CE Certified Company
Manufacturers and Exporter of Medical Products

MINI CRYOSPRAY GUN

300 ml



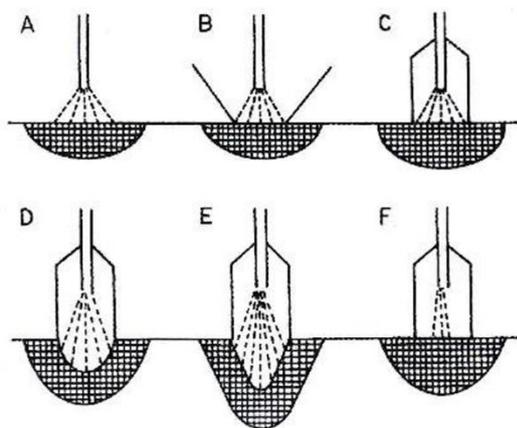
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Liquid Nitrogen Cryo Gun

- Liquid Nitrogen Cryo treatment requires only about one-third the time required by CO₂ or snow or nitrous oxide system (Regular Cryogun) to achieve the appropriate degree of freezing because of the relative temperatures (-196° C when compared to -79° C).
- Liquid nitrogen can be applied directly by spraying the gun.
- It is convenient to arrange a freezing session on a specific day thereby on the same day any number of patients can be treated.
- Easily portable and can be used in any consultancy room since it did not require any kind of anaesthesia; it can be carried out single-handed with no scarring required.
- Liquid Nitrogen Treatment can be done most conveniently and economically by arranging to have the can filled at a local hospital, laboratory or even at a factory as liquid nitrogen nowadays is widely used for many purposes and small quantities like 300 ml work out at no cost.

Method to use with a liquid nitrogen system

Liquid Nitrogen can be applied in a direct precise spray form with a Cryo spray gun to treat a wide variety of dermatological procedures and gynaecological conditions quickly and effectively. Liquid Nitrogen spray reduces your application time and eliminates the adhesion of probes.



*Application modes
with corresponding
iceball shape.*

- A. Open spray
- B. Cone spray
- C. Flat cryoprobe
- D. Rounded cryoprobe
- E. Pointed cryoprobe
- F. Open-end cryoprobe

Technical detail's to use the Cryogun

Remove the cap of the Cryo gun and pour liquid nitrogen into the Cryo gun flask slowly from the storage container (cryo-can) using a funnel only up to 3/4th of the flask.

Close the gun's cap and wait 5 minutes for the pressure to be built before use. Select spray tips according to the lesion sizes numbering 1,2,3,4 or 5.

For a single short freeze, local anaesthesia is not required.

Mark circles around the lesion with a skin marker. Hold the Cryogun supporting the index figure on the trigger rod ready to freeze and maintain the gap of the spray tip at least 10mm or half inches away from the lesion. Spray directly on the lesion or wet the lesion with water or surgical gel. A wet surface will give better results and the penetration will be deeper.

The ice ball beyond the target margin is ideal and allows for slow thawing. If necessary, allow for repeat freeze, freezing area: Benign 1-2 mm; premalignant 3-5 mm; malignant 5-10 mm.

Spraying is done on the lesion and the ice field gradually extends to the marked area.

The spray is adjusted with the trigger rod by adjusting the top screw.

NON MALIGNANT DERMATOLOGICAL LESIONS FREQUENTLY TREATED BY CRYOSURGERY

Disorder	Cryosurgical Technique					Healthy tissue Halo (mm)	Total Thaw Time (sec)
	Spray		Cryoprobe				
	Open	Restricted	Flat	Round	Pointed		
Angiokeratoma			✓		✓	1 - 2	10 - 15
Angioma							
Osler-Rendu-Weber					✓	1 - 2	10 - 15
Swepiginosum	✓		✓				
Cavernous			✓	✓		see text	see text
Strawberry			✓	✓			
Dermatofibroma		✓	✓	✓		2 - 3	30 - 120
Granuloma pyogenicum	✓	✓	✓			2 - 3	30 - 90
Keloid		✓	✓			see text	see text
Keratoacanthoma	✓					2 - 3	30 - 60
Keratosis	✓						
Actinic	✓					1 - 2	10 - 30
Arsenial	✓					2 - 3	20 - 60
Seborrheic	✓					1 - 3	10 - 40
Lentigo	✓	✓				1 - 2	10 - 15
Leikoplakia	✓		✓	✓		3 - 5	45 - 90
Molluscum Contagiosum					✓	1 - 2	10 - 15
Mucocele	✓			✓		2 - 3	45 - 60
Parakeratosis Plantaris Discreta	✓					2 - 3	20 - 40
Sebaceous Hyperplasia					✓	1 - 2	10 - 15
Verruca							
Digitate	✓					1 - 2	10 - 15
Periungual	✓					1 - 2	10 - 15
Plana	✓				✓	1 - 2	10 - 15
Plantaris	✓	✓				2 - 3	10 - 30
Venereal	✓					1 - 2	10 - 20
Vulgaris	✓	✓				2 - 3	15 - 30

CAUTION AND FAULT DIAGNOSIS

While refilling the Cryogun pour the liquid nitrogen slowly from the storage container using a funnel.

Always keep the Mini Cryogun in an upright position (vertical) as shown on the front page. If there is any gas with pressure in the mini Cryogun lift the safety valve by pulling upwards and releasing gas. Also, press the operating trigger handle several times till the entire gas is released and then slowly remove the top cap.

Keep the Cryogun always in the carrying case after its use to avoid any damage to the container.

DIFFERENT TYPES OF PROBES DETAILS

CONTACT PROBE SHARP

This is useful for small aniomas and molluscum contagiosum.

CONTACT PROBE CONICAL

These may be intanded into a large or ulcerated lesion thereby markedly increasing the surface area of freezing because the tissues come in contact with the sloping of the conical surface.

CONTACT PROBE BALL TYPE

This is for uncerated tumours, large tumours, concave or underlying boney structures or for a dome like symmetrical freeze in soft tissue.

CONTACT PROBE HAMORRHOID

This is useful for general surgery(Hemorrhoid) and in rectal portion.

CONTACT PROBE ENDO/EXO & CONDYLOMA

This is useful for vaginal areas to treat wide variety of Gynaecologic conditions, cervical erosions, cervical dysplasia, selected cervical cancer, in situ condylomata accuminata, chronic cervicities.

CONTACT PROBE 4mm DIA-NASAL PROBE

This is useful for hyperplastic lesions such as leukoplakia of the mouth and general lesions. These tips are available at extra cost.

Temperature of Cryogenes

CRYOGEN	Temperature (C)	
	Boiling Point when used in closed cryoprobe system	Applied to skin in open atmosphere
Liquid Nitrogen	- 196	- 196
Nitrous Oxide	- 86	----
Carbon Dioxide	----	- 78.5
Halocarbon 22	- 40.8	- 70*
Halocarbon 12	- 29.8	- 60*
Halocarbon 114	----	- 30*



From

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WARRANTY CERTIFICATE

Customer Name: _____

Address: _____

Equipment Name: _____ Serial No.: _____

Warranty Form: _____ To _____

The Instrument is warranted by the manufacturer for one year from the date of purchase and during this period, the defective parts shall be replaced or repaired, free of charges, if it is due to faulty material or workmanship, subject to the following Terms and Conditions.

- The Instrument should be used properly in accordance with the instructions as given in the instruction manual.
- The warranty does not cover the Instrument attended by others excepting our authorised service centre / dealer.
- Replacement of parts made of Rubber Electrodes, Laser Probe, Laser Diode, enclosure and carry bag are not covered within this Warranty.
- The cost incurred bringing the machine to our dealer's premises or service centre and back are to borne by the customer.
- The Warranty does not cover the Instrument operated outside the range of stipulated Electric Supply i.e. below 110 Volts and above 240 Volts.
- The decision of the manufacturer is final in all cases of warranty claims.