



Naturensbalm
AN ENVIRONMENTALLY SAFE
ALTERNATIVE


Information Pack

Practical Guide for New Users

Embalming Product Range



Caring today for a better, healthier
tomorrow

by supplying quality mortuary products to
the funeral industry

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Product Information

Introduction

Naturensbalm is the collective term used for a range of patented environmentally sanitising products for the funeral industry with the prime objective of providing the embalmer with a safer and environmentally friendlier alternative, whilst at the same time safe-guarding traditional funeral rites.

Naturensbalm consists of 16 complementary products, all of which have been rigorously tested and trialled over a number of years; the range is fully compliant with the European Union's Biocide Products Directive (BPD).

Administered employing standard embalming equipment and techniques, the Naturensbalm range is easy to use requiring minimal training and little transitional time.

Whilst other known products can dehydrate, Naturensbalm's unique hydrating properties will provide a more natural 'sleeping' appearance of the deceased.

Significant advantages and benefits include:

Environmentally Safe & Responsible

Biodegradable

Non-infectious

Unique Hydrating Properties

Natural appearance of the deceased

Maintaining Traditional Funeral Rites

Regulatory Compliant

Naturensbalm is not a long-term embalming solution; it is a sanitising process post death pre-burial/cremation.



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Efficacy Tests

Naturensbalm Arterial and Cavity fluids have been tested by a UKAS accredited testing laboratory against EN 1276:1997 Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in industrial, domestic and institutional areas.



Both fluids passed the test demonstrating a 5-log reduction in viability in 5 minutes at 20C under dirty conditions.

Naturensbalm Arterial and Cavity fluids have been tested by a UKAS accredited testing laboratory against EN 1650:2008 Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity of chemical disinfectants used in industrial, domestic and institutional areas. Both fluids passed the test demonstrating a 4 log reduction in viability under dirty conditions.

PVP-Iodine – Activity

- PVP-Iodine (polyvinylpyrrolidone iodine complex or PVP- I) has been used for many years in both human and veterinary medicine to kill, on contact, a wide variety of bacteria, viruses, fungi, toriprotozoa and yeasts.
- PVP-I has been used for many skin treatments in human medicine, hand and body disinfection, treatment of burns & ulcers, dental, veterinary and aquaculture applications.
- It is effective against a broad spectrum of disease-causing micro-organisms and is particularly effective in treating mixed infections. Its effectiveness has been clinically proven.
- Any antibacterial action is wholly attributed to free molecular iodine released from the PVP-I in a controlled manner. PVP itself has no bactericidal effect but owing to its affinity for cell membranes is able to deliver the active ingredient to its target.

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Anti-Microbial Activity

- The active biocide, iodine, reacts with enzymes of the respiratory system as well as with amino acids from the cell membrane proteins both located in the cell wall of the micro-organism.
- The structure of the microorganism is irreversibly damaged.
- The mode of action of PVP-I is non-specific.
- The in vitro biocidal activity of PVP-I has been extensively studied over many years and a summary of results is shown in Table 1.
- In vitro test comparisons have shown PVP-I to be equal to or more effective than other commonly used biocides such as Chlorhexidine gluconate and benzalkonium chloride.
- PVP-Iodine solution has been found to be an effective antibacterial agent against methicillin-resistant staphylococcus aureus (MRSA) as well as methicillin sensitive staphylococcus aureus strains (MSSA) killing all within 30 seconds.
- Both in vitro and in vivo studies of Naturensbalm against *Pseudomonas aeruginosa* conducted under BSI conditions by an independent laboratory, States of Jersey Pathology Laboratory, showed effectiveness up to 11 days, the duration of the trials.

Anti-Viral Activity

- PVP-I has been shown to inactivate human immunodeficiency virus (HIV).
- PVP-I was found to be virucidal when tested in Type 1 (Sabin strain) polio virus.
- A use-dilution iodophor was capable of inactivating an infectious dose of Hepatitis.



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Table 1 – Microbiological Efficacy of PVP-I

| Organisms (No. of Strains) | PVP-I (Available Iodine ppm) | Contact of Kill (Time in Seconds) |
|-------------------------------|---------------------------------|--------------------------------------|
| Proteus (41) | 100-2500 | 15-180 |
| Staphylococcus (36) | 66-2500 | 15-80 |
| Pseudomonas (36) | 25-2500 | 15-900 |
| Streptococcus (25) | 200-2500 | 15-30 |
| Escherichia (23) | 200-2500 | 30-120 |
| Salmonellas (9) | 1000-2500 | 15-60 |
| Candida (8) | 3.75-2500 | 10-120 |
| Serratia (6) | 200-2500 | 60-120 |
| Spores – Bacillus | 10000 | 2-5 hrs |
| Trichomonas (5) | 400-2500 | 30-60 |
| Enterobacter (4) | 1000-2500 | 60 |
| Klebsiella (4) | 500-2500 | 60 |
| Clostridium (4) | 1000 | 30-60 |
| Shigella (3) | 1000-2500 | 60 |
| Corynebacterium (3) | 2500 | 60 |
| Diplococcus (3) | 1000-2500 | 60 |
| Mycobacterium (3) | 1000-2500 | 60-120 |
| Bacillus (3) | 7.5-2500 | 10-30 |
| Sarcina (2) | 500-2500 | 60 |
| Trichophyton (2) | 1000 | 60 |
| Aspergillus (2) | 1000 | 30 |
| Mima (1) | 2500 | 60 |
| Herella (1) | 2500 | 60 |
| Edwardsiella (1) | 2500 | 60 |
| Citrobacter (1) | 2500 | 60 |
| Providencia (1) | 1000 | 60 |
| Acinetobacter (1) | 3.75 | 10 |
| Epidermophyton (1) | 1000 | 60 |
| Microsporium (1) | 1000 | 60 |
| Penicillium (1) | 1000 | 30 |
| Nocardia (1) | 2500 | 60 |

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Practical Application Techniques

Mixing the product for the arterial injection process Into a pressure tank:

First add 2 pints of Water.

Then add 1 Litre (32 fl oz in the U.S.) NATUREArterial.

Next add 500ml (16 fl oz in the U.S.) NATUREFlo activator.

Top up the solution to the 6-litre (1.5 US Gallon) mark with water.

Add dye to meet your own requirements (if desired) using NATUREColourant.

At this stage, having lost its characteristic dark brown

colour and with the addition of dye, the Naturensbalm solution resembles many of the formaldehyde fluids that embalmers are familiar with.

Should **NATUREUltra** (water corrective) be deemed necessary, i.e. in 'hard water' areas NATUREUltra may be added at a rate of - 1 litre (16 - 32 fl oz in the U.S.) prior to final 'topping- up'. The final total of 6 litres (1.5 U.S. gallons) remains the same.

NATUREUltra X is available for exceptionally hard water areas.

Important Notes

If the deceased is oedematous (edema) on receipt, 1 litre of **NATUREOedema fluid** should be added in place of the **NATUREFlo activator**. The oedema fluid will increase the osmolarity of the Naturensbalm mix to help combat the excess fluid within the body. Working on the basis of osmosis we have found that this is successful in pulling the excess fluid back through the cell walls, thus shrinking the cell as opposed to overfilling which would cause the cell walls to burst and could result in gravitational leakage. **Naturensbalm** favours the 'waterless' approach which results in raising the specific gravity of the fluid. For example the tank would contain 2 x 1 litres **Naturensbalm arterial** plus 2 x 1.0 litres **NATUREFlo Oedema** and no water at all.

Of course the oedema in the tissues will dilute the fluid on injection but Naturensbalm has found this to be the most successful method.

The **NATUREFlo** and **NATUREOedema** additions are designed to be used in conjunction with the **NATUREArterial** on an individual basis. On no account should they be mixed in the same tank.

We advise that in all cases, packing all the orifices is required on completion of the injection process. This is because Naturensbalm will not harden the viscera like formaldehyde based fluids and gravity may allow it to leak.

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Additional Notes

Here are a few points that users of the product need to be aware of:

No index, the product comes bottled in a measured amount and strength.

There are no fumes therefore, although ventilation is advised in general terms, extraction is not required.

The product employs exactly the same hardware for the embalming process as traditional fluids.

No pre-injection required. The product clears through clots and blockages very effectively.

Injection points are an important consideration, some are not recommended for use with Naturensbalm, however the most commonly used such as the common carotid are very effective.

No additional additives required for situations such as jaundice, no need for a restorative or humectant product.

Full penetration of the tissues is crucial to achieve and maintain the desired result, however as there is no firming of tissue it can be difficult initially for embalmers

to recognize when full penetration has been achieved.

Re-aspiration is not advised, however, if required, the addition of our cavity fluid should be delayed until after the second aspiration has been completed.

Again as there is no firming, facial features are set at the end of the embalming process, giving ample opportunity to make adjustments as required.

Natural over the counter cosmetics are preferable as the

skin texture remains as in life, completely natural to the touch.

Support of the deceased in the coffin/casket may require slight amendments to achieve the best results.

There will undoubtedly be other small things to be considered to achieve the best possible results as you work with

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the product. As we know and recognise no two deceased bodies are the same. In short we believe there are no downsides only positives once you have converted to Naturensbalm and are using the product regularly and

in an appropriate manner, in the right situations.

The Injection Process

During the period of trial and development, one thing became apparent with the use of Naturensbalm; the injection process needs to be undertaken in a precise and complete manner.

The fluid is not as diffusing as formaldehyde, nor does it work

in the same chemical way. This is a microbiological development that effectively sanitises and disinfects the body, holding it stable for the average required time in the Chapel of Rest.

Naturensbalm does, however, need to be administered thoroughly; short cuts and poor technique will end in poor results.

We have proven that the method of restricted cervical injection produces, by far, the better results. As does an

injection pressure of no more than 5 P.S.I.

In normal circumstances (in the UK) with the wait for certification and permission to embalm, the body can be 5 days dead

(or more) before treatment may take place.

A single point injection against a blocked system often provides a quick sanitisation of the body only.

The restricted cervical method was trailed extensively when we discovered that post mortem (autopsy) cases were lasting better and longer because of specific direct injection into each separate section of the body.

For the best results we would also recommend the use of vein drainage.

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Restricted Cervical Injection

For Non Embalmer

The restricted cervical injection involves both common carotid arteries being raised and one of these being clamped off nearest to the aorta, thus stopping the flow of the fluid up the common carotid on that side. This in turn restricts the flow of fluid to the head of the deceased.

Both carotid arteries are left open at the superior end (i.e. nearest the head) to allow the bypassing of the face by the fluid. This enables us to inject more fluid in the first instance towards the body and to have complete control over the head.

We must be aware that the head still receives fluid via the two vertebral arteries that rise from the sub-clavian arteries and run up the back of the neck into the brain, but that this is much less than with a single point injection process.

The head is then treated separately via direct injection into each side, thus getting better saturation of the tissues.

If restricted cervical injection is not possible because of disease, injury or indeed clothing supplied, then injection of Naturensbalm has been proven to be successful via iliac or femoral arteries. However, the axillary artery remains the poorest injection point for any type of embalming fluid.

Each deceased person should be reviewed individually as regards the amount of fluid they require and the period of time between embalming and burial / cremation.

Generally, 6 litres has been found to be sufficient for the majority of cases. It will be noticed that during direct injection of the head that the tissues do not 'overflow' as quickly as with formaldehyde fluids.

Post mortem cases require to be thoroughly injected, including the vertebral arteries that so often are neglected.

In the case of thin scalps, Naturensbalm has been shown to fill the forehead so that a line of demarcation following removal of the calvarias is less apparent.


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Observations

- Naturensbalm can successfully be introduced via hypodermic into fingertips and lips. The rehydration ability of Naturensbalm will be beneficial to hard leathery lips and dehydrated eyes.
- As Naturensbalm has a unique ability to rehydrate tissue, it can be used to soak cotton wool for the neck reconstitution of post mortem cases.
- Razor burn effected before receipt of the body is considerably improved.
- Scuffed skin and hard dark scarring will also respond to the rehydrating effects of Naturensbalm.
- Naturensbalm does not 'firm-up' the skin as conventional fluid do. The skin of the deceased remains soft to the touch, something that the bereaved find more natural.
- Gone are the problems of 'greying off' and burning of the capillaries. The skin does not dehydrate after embalming in the way that cases treated with formaldehyde do.

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Conclusion



Although the treatment of a case with Naturensbalm may take a little longer to complete, it does provide a completely different appearance to a case treated with conventional fluids. The aesthetic results are very pleasing and have been well received by funeral client families and staff, with comments including that the deceased 'feel more natural'. The facial features look relaxed - not stressed. Initially you may not like the effect produced, particularly if dye has not been administered to the tank. Indeed this may be true if you are a devotee of the firm and intensively coloured product we are all used to seeing.

On the positive side you might feel just that little bit better after a long day, with less headaches, nasal rhinitis and depression. Your clothing and hair will smell that bit better too. For those of you wishing to find an alternative fluid, Naturensbalm will sanitise and protect naturally the majority of cases in your care.


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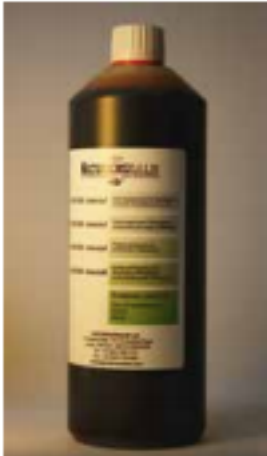
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NATUREArterial 1 Litre Concentrate (32 fl oz. in the U.S.)

An organic, non-toxic sanitising and disinfecting fluid.

In its original state, NATUREArterial is a dark brown/yellow viscous solution, which works in conjunction with NATUREFlo, an activator and arterial conditioner.



NATUREFlo 500ml (16 fl oz. in the U.S.)

Designed to activate the NATUREArterial by reducing the surface tension and to allow the viscous fluid to penetrate the tissues of the body more effectively. NATUREFlo also removes the dark colour, allowing the operators to 'self-dye' the fluid to their own specific requirements.



NATUREColourant 500ml (16 fl oz. in the U.S.)

A red colour concentrate specifically designed to work with NATUREArterial to provide excellent presentation for viewing.



NATURECavity 500ml/350ml tube (16 fl oz. in the U.S.)

A cavity fluid designed for straight cases. Available in bottles or dispensing cartridges.



NATURECavity Autopsy 1 Litre (16 fl oz. in the U.S.)

A more viscous cavity fluid, for treating the viscera of post mortem cases.



NATUREOedema 1 Litre (32 fl oz. in the U.S.)

Helps stabilize bodies with excess fluid retention, should be used as a direct replacement for NATUREFlo not in addition.

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NATURECavity Gel Available in 500g tubs or 350ml tubes

A topical application for treating the cavities of autopsy cases, also the thoracic and abdominal flaps, the anterior and posterior flaps of the scalp.



NATUREExternal Gel Available in 500g tubs

Suitable for topical application to abdominal areas of severely degenerated bodies.



NATUREGel X Available in 500g tubs

For treatment of diseased tissues, i.e. Bedsores. This application will hold in place under a dressing and will virtually eradicate the odour associated with diseased tissue.



NATUREUltra 1 Litre Concentrate (32 fl oz. in the U.S.)

Water Corrective.



NATUREUltra X 1 Litre Concentrate (32 fl oz. in the U.S.)

Water corrective for exceptionally hard water areas.