

# Dissecting disinfectants – are you getting value from your disinfectants?

There is continuing pressure on dental practices to provide high quality patient care, and also run an efficient and profitable practice. Effective cleaning and disinfecting procedures are an integral part of a practice's infection control policy. Cleaning involves the physical removal of soiling matter from surfaces whilst disinfection refers to the inactivation of pathogens.

**When selecting a dental disinfectant, efficacy and reliability cannot just be assumed. There are a number of factors to take into consideration including:**

- **Suitability for the job that will be performed** – is the disinfectant compatible with the instrument/surface/equipment?
- **Efficacy for the job which will be performed** – is the disinfectant active against the appropriate microorganisms?
- **Ease of use** – is the disinfectant in the optimal format?
- **Time** – contact times vary considerably between disinfectants.
- **Safety** in use
- **Storage considerations** – how many litres does a concentrated disinfectant reconstitute to?
- **Cost and reliability** of supply.

## Pre-sterilisation cleaning of instruments

Effective cleaning of instruments is an essential prerequisite before sterilisation and will reduce the risk of transmission of infectious agents. [HTM01-05, 2013]

### Questions to consider when selecting a disinfectant for cleaning of dental instruments:

**How many enzymes does the disinfectant contain?**

Multiple enzymes are scientifically proven to more effectively remove bio-burden than a single enzyme.

**Is the disinfectant effective against bacteria, yeast and viruses?**

Not all disinfectants have comparable efficacy.

**How long is the contact time for the disinfectant to work?**

Long contact times of over 10 minutes can be difficult to achieve in a busy practice.

**How many litres does the disinfectant reconstitute to?**

One litre of one disinfectant may reconstitute to twice as much product as a similar disinfectant. This has both cost and storage implications.

**gigazyme® Plus<sup>3</sup> is an enzyme based solution for the cleaning and disinfection of dental instruments.**



Product	No. of enzymes	Bactericidal/ Virucidal/ yeasticidal	Contact time	In use litres
gigazyme® plus <sup>3</sup>	3	Yes	5 mins	1 litre = 200 litres
Alternative disinfectant*	1	Not stated	Not stated	1 litre = 100 litres

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## Disinfecting dental impressions

The responsibility for ensuring impressions have been cleaned and disinfected before dispatch to the dental laboratory lies with the dentist [HTM01-05]. Microorganisms can be transferred from contaminated impressions to dental casts, and oral bacteria may remain viable in set gypsum materials for several days [Pandis, 2006].

### Questions to consider when selecting a disinfectant for dental impressions:

#### Spray or immersion?

When disinfectant sprays are used for alginate impressions, they can result in air bubbles in the cast, which may distort the quality of the impression [Nandini, 2008]. Sprays also pose a potential inhalation risk.

#### Is the disinfectant compatible with the impression material?

The selected disinfectant should not compromise the precision of the impression.

#### Is the disinfectant active against bacterial spores, M. tuberculosis and viruses including HIV, HCV and HBV?

Dental impressions do not tolerate heat treatment so should always be chemically disinfected to eliminate the risk of cross contamination.

#### perform® ID for deep cleaning and disinfection of dental impressions.



Product	Format	Aerosol risk	Broad spectrum efficacy	Meets EN standards
<b>Perform ID</b>	Full immersion	No	Yes	Yes
<b>Alternative disinfectant*</b>	Spray	Yes	Not stated	Not stated

Product	Biodegradable	One product system	Virucidal	In use
<b>aspirmatic</b>	Yes	Yes	Yes	2 litres = 100 litres
<b>Alternative disinfectant*</b>	No	No	Not stated	1 litre = 20 litres

## Disinfecting dental suction systems and spittoons

Dental aspirators must be cleaned and maintained according to the manufacturer's recommendations.

The tubing drains and spittoons should be cleaned at the end of every session with a non-foaming detergent specifically designed for the purpose.

**aspirmatic® is a 3 in 1 solution for cleaning, disinfecting and de-odourising dental suction units.**



### Questions to consider when selecting a disinfectant for dental suction systems and spittoons:

**How effective is the detergent selected?**  
Does it prevent the build up of biofilm?

**How easy is the disinfectant to use?**  
A one product system can save valuable staff time.

**How long is the contact time?**  
This can vary from 30 minutes upwards.

## References

HTM 01-05, 'Decontamination in primary care dental practice' the Department of Health (England), 2013

Nandini, V. V., Venkatesh, K. V., & Nair, K. C. (2008). Alginate impressions: A practical perspective. *Journal of Conservative Dentistry : JCD*, 11(1), 37–41. doi:10.4103/0972-0707.43416

Pandis N, Brandi D, Pandis, a Vasilios Pandis, Eliades T, 2006, Occupational hazards in orthodontics: A review of risks and associated pathology; *American Journal of Orthodontics and Dentofacial Orthopedics*, Volume 132, Number 3

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\*Product comparisons have been made using similar products available in the UK. Actual product names have not been used for copyright reasons.

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