

## HOW TO DISINFECT DENTAL IMPRESSIONS

Based on studies in our own laboratory and a growing number of publications in various dental journals, a short-term immersion during 10–15 minutes in a suitable **water based** disinfecting solution, is an effective and clinically acceptable way of infection control in the surgery and the dental laboratory for impressions made of:

- imprEssix Alginate and imprEssix ColorChange Alginate

### **The correct procedure is as follows:**

1. Follow the general hygienic guidelines.
2. Rinse the impression, after removal from the patient's mouth, gently with tapwater.
3. Immerse the total impression plus tray, including the grip, for 10 minutes in a suitable water based disinfecting solution, prepared according to the manufacturer's instructions.
4. Rinse the impression gently with tapwater.
5. Remove the excess water from the impression.
6. *Pour the impression immediately with gypsum.*  
This gives the best results for alginate impressions.
  - *Store the impression for transport in an atmosphere of 100% R.H.*  
(e.g. in a closed plastic bag)  
This is a necessity for alginate impressions when not poured immediately.

### **This procedure will guarantee:**

- \* no significant dimensional change
- \* no significant effect on detail reproduction
- \* no significant effect on surface-smoothness of the gypsum cast
- \* in some cases even a slightly increased gypsum surface hardness.

In most studies, including one carried out in our own laboratory, sodium hypochlorite solutions (in concentrations ranging from 0.5 - 2%) or glutaraldehyde solutions (concentration 0.13 - 2%) were used. Although the main purpose of all studies was the effect of immersion on the dimensional stability of the impression and the quality of the gypsum surface, it is suggested many times that the solutions mentioned would be effective in terms of infection control.

- Do not use water based glutaraldehyde solutions with a pH of 8 or higher for since this might affect the gypsum surface.

### **Conclusion:**

1. A 10 minutes disinfection of an Alginate impression in a in a fresh prepared 1% hypochlorite solution is a clinically acceptable procedure.  
(1 part Sodium hypochlorite, containing 4 gram Chlorine /100 ml + 3 parts demi-water)

## LITERATURE

- 1."Guidelines for infection control in the dental office and the commercial dental laboratory" published by The American Dental Association – Council on Dental Therapeutics and Council on Prosthetic Services and Dental Laboratory.  
*JADA 1985;110:969-972*
- 2."The effect of disinfection procedures on an alginate impression material" by J.C. Setcos et al. *IADR Abstract nr. 582, March 1984.*
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- 4."Dimensional stability of dental impressions after immersion disinfection" by S.P. Herrera et al. *JADA 1986;113:419-422*
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- 6."Dimensional stability of alginate impressions immersed in disinfecting solutions" by D.P. Purr et al. *J Dent Child 1987:45-48*
- 7."The effect of chlorinated disinfecting solutions on alginate impressions" by S.J. Wilson et al. *Rest Dent 1987:86-89*
- 8."Desinfection of irreversible hydrocolloid impressions: a comparative study" by M.R.J. McNeill et al. *Int J Prosth 1992;5:563-567*
- 9."Desinfection of impression materials to prevent viral cross contamination: a review and a protocol" by P.C. Owen et al. *Int J Prosth 1993;6:480-494*
- 10."Effects of disinfecting irreversible hydrocolloid impressions on the resultant gypsum casts: Part II - Dimensional changes" by H.K.Tan et al. *J Prosth Dent 1993;70:532-537*
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- 12."Immersion Disinfection of Irreversible Hydrocolloid Impressions. Part 2: Effects on Gypsum Casts" by T.J. Hilton et al. *Int J Prosth 1994;7:424-433*