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Toraysee™ used for Medical Equipment

Toray Industries, Inc.
Toraysee sales sect.

18tn Jan 2023

Ⅰ. Toraysee's sodium hypochlorite chemical resistance

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A) Sodium hypochlorite concentration 10,000ppm (1%)

【Evaluation contents】

1. Changes in fabric weight after immersion in chlorine-based disinfectant
2. Presence or absence of embrittlement of fabric by SEM observation
3. Presence or absence of strength change of the fabric by measuring tensile strength and elongation
4. Presence or absence of color change (bleaching) of the fabric by colorimetry (L value = lightness) measurement
5. Wiping performance evaluation (ATP)

【Result】

Toraysee was immersed in 50,000 ppm sodium hypochlorite for 5 weeks, and changes in the fabric were checked every week, but no change was observed in any of the evaluation contents.

Reference: Hatakeyama T, J Jpn Assoc Clin Engineer Technologists 2016;56:100–3 (In Japanese)

B) Sodium hypochlorite concentration 50,000ppm (5%)

【Evaluation contents】

Immerse Toraysee in 50,000 ppm sodium hypochlorite solution at 15℃ for 10 minutes, then wash thoroughly with distilled water.It was dried at 60℃ and weighed.
(It is assumed that there is no damage to the fabric if there is no change in the weight of the fabric.)

【Result】

Toraysee was immersed in 50,000 ppm sodium hypochlorite for 5 weeks, and changes in the fabric were checked every week, but no change was observed in any of the evaluation contents.

Reference: Hatakeyama T, J Jpn Assoc Clin Engineer Technologists 2016;56:100–3 (In Japanese)

Ⅱ. Suggested approach

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If Toraysee is reused, there is a possibility that there will be a total cost advantage compared to disposable cloths.
However, reuse requires a cleaning and disinfection process for Toraysee, so we think it would be better to approach by limiting applications that require more infection control.

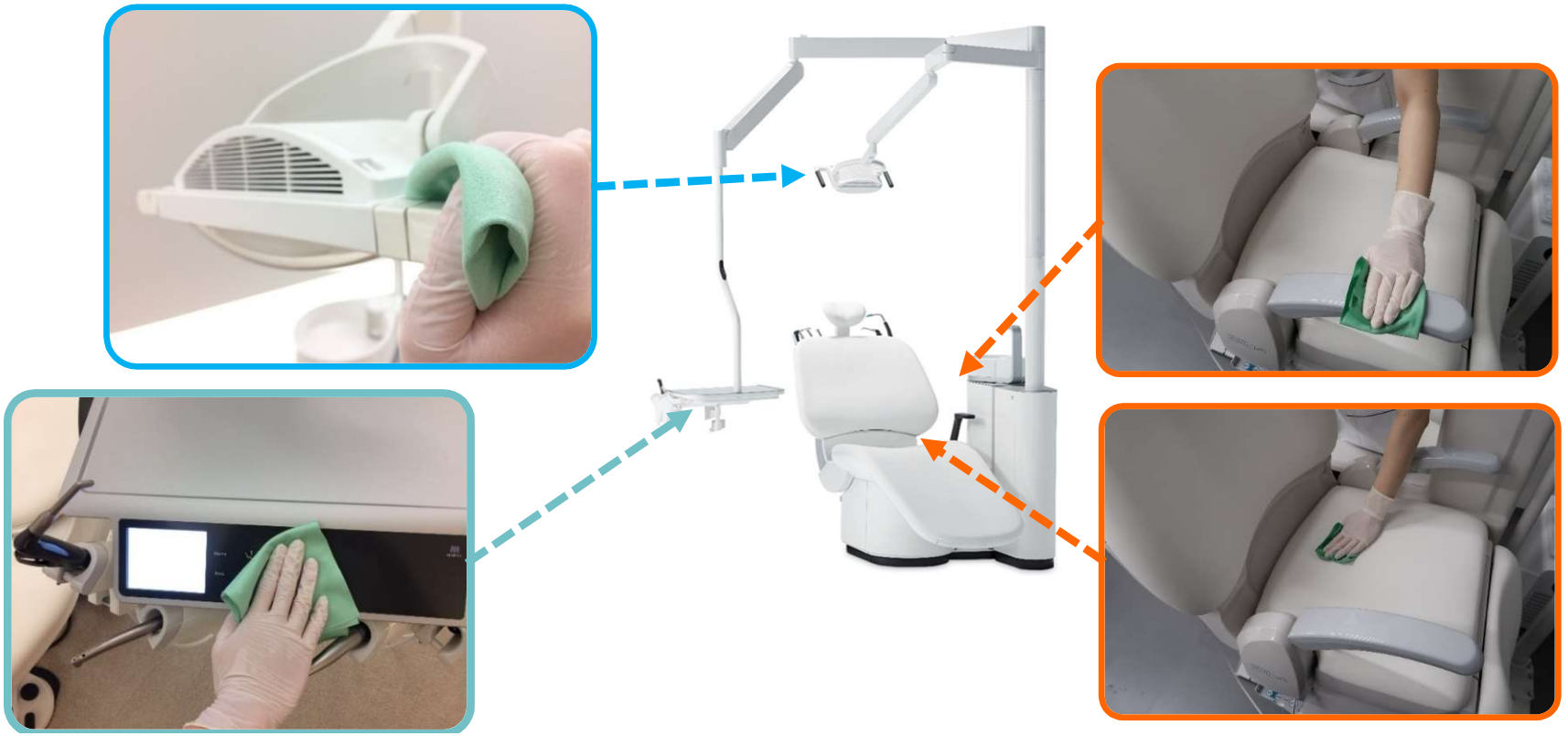
For example:

- Expensive medical equipment
- Incubator, newborn nursery
- Places with many human contact points (as infection control) keyboards, touch panels, etc.
- Dental clinic →to the next page…

Reference: Hatakeyama T, J Jpn Assoc Clin Engineer Technologists 2016;56:100-3 (In Japanese)

Examples of use in Japanese dental clinics

As a countermeasure against droplet infection, the Toraysee is soaked in disinfectant and wiped every time the patient changes.
Due to the spread of coronavirus infection, the demand for dental infection control has increased rapidly, and the demand at Toraysee's dental clinic is also growing.



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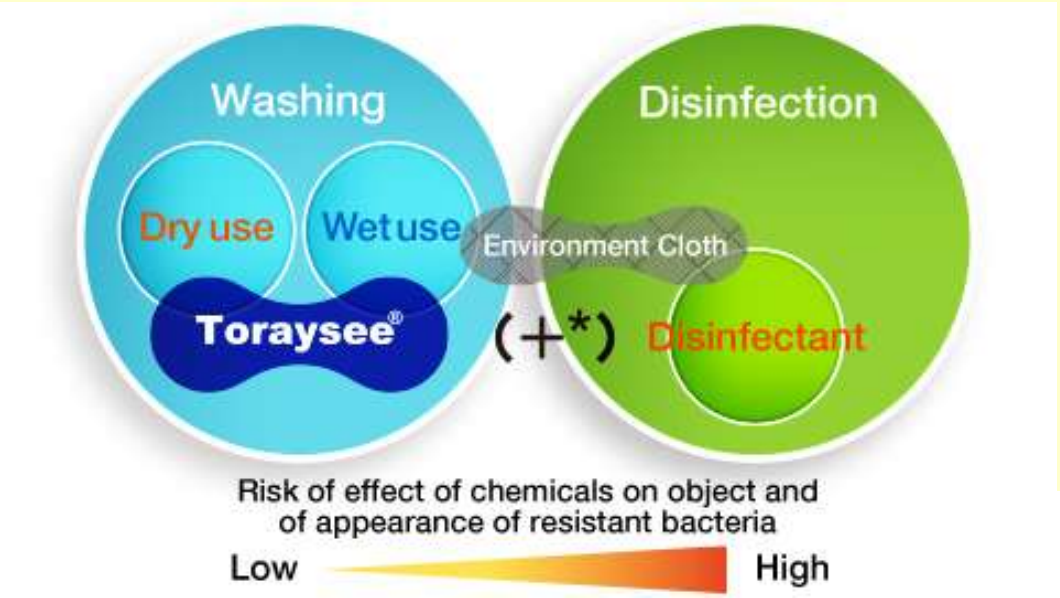
- **In the cleaning of medical equipment and instruments, priority is given to the "washing" process.**

- **Toraysee ® is a cloth that specializes the removal of organic materials and other dirt and washing without the use of chemicals.**

- **It can be used wet or dry according to requirements, and can also be impregnated with disinfectant.**



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Ⅴ.How to use

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- Toraysee ® can be used either dry or wet.
- When used wet, it should be soaked with tap water.
- Toraysee ® can be impregnated with disinfectants when necessary.
- Toraysee ® fully soaked with water can be wrung our firmly.

Wet use has a 10 times great cleaning effect than dry use!

＊source:Kitasato University Hospital ME center
（Therapeutic Research 2013, vol.34, No.3)

Ⅵ. Applications

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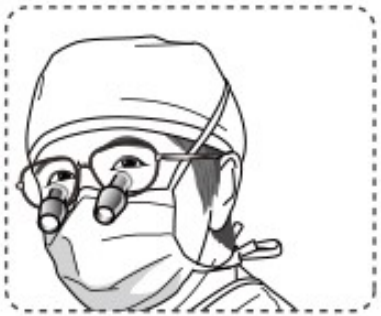
Suitable for daily maintenance in a range of applications, such as hospital equipment, monitors,etc.


Dialysis monitor


Endoscope monitor

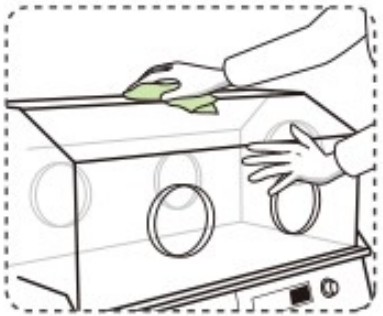

Laparoscopy monitor

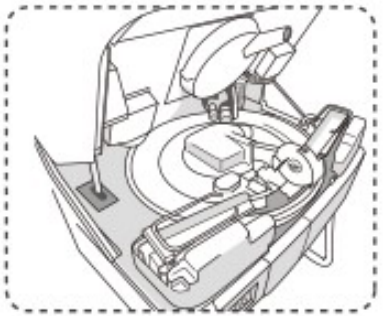

Monitors


Magnifying glasses


Syringe pumps, etc.


Small steel instruments, etc.


Infant incubators


Medicine dispensing machines