

## Supplementary Information

# Microbiologically Pure Cotton Fabrics Treated with Tetrabutylammonium OXONE as Mild Disinfection Agent

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### Standard washing procedure of cotton fabric:

1. two prewashing steps (in consecutive chambers) at 45 °C for 5 min each
2. four main washing steps at 65 °C for 5 min each
3. three rinsing steps for 5 min each
4. pressing for 3 min to decrease the amount of water
5. drying at 120 – 140 °C
6. ironing at 180 °C for 30 – 60 s.

During the prewashing and washing the weight ratio of cotton fabric to water was 1:4 whereas during rinsing it was 1: 6.

### Synthesis of TBA-OXONE

OXONE (1 equiv.) and varying amounts of nBu<sub>4</sub>NHSO<sub>4</sub> were used to extract TBA-OXONE into CH<sub>2</sub>Cl<sub>2</sub>. By utilizing one equivalent of nBu<sub>4</sub>NHSO<sub>4</sub> in a single extraction, 88% of the oxidative equivalence is obtained in soluble form.

Additionally, it was not necessary to mix the solids for a longer time, because the simple mixing of both solids in water followed by immediate extraction provided reproducible results. The success of this procedure is attributed to the fact that

KHSO<sub>5</sub> dissolves preferentially over KHSO<sub>4</sub> and K<sub>2</sub>SO<sub>4</sub>, and that nBu<sub>4</sub>NHSO<sub>5</sub> is more soluble in dichloromethane than nBu<sub>4</sub>NHSO<sub>4</sub>.

