

# Case Study

## VEGETABLE PROCESSING PLANTS

# Remove $\beta$ -carotene deposits safely and efficiently with Forcegel™



## Challenges

When cutting orange vegetables such as carrots, friction between the vegetable and the work surface leaves a fine deposit of  $\beta$ -carotene on the surface. This deposit is very difficult to remove, and a multi-product approach followed by mechanical action is recommended. This multi-product approach adds at least 40 minutes to total cleaning time: 5 minutes to apply the first product, 5 minutes to apply the second product, 20 minutes of contact time and 10 minutes of rinsing.



## Solution

The plant started using Forcegel™ at a concentration of 4.2% daily on soiled surfaces after a pretreatment with sodium hypochlorite. Contact time was between 15 and 30 minutes, depending on location. After two weeks of use, the plant was able to eliminate the pretreatment step and reduce amount of the mechanical action required.



## Results

The results achieved with Forcegel™ were superior to those prior to its use. Following the application of Forcegel™ at 4.2%, orange stains on surfaces disappeared. Cleaning time was reduced by more than 10% and additional costs related to the application of a second chemical were lowered. Mechanical action was only needed in locations where it was difficult to achieve the desired contact time (such as on slicing blades).

Cleaning Efficiency with Forcegel™ – Initial State (left) vs. Post Cleaning (right)

