

Experiments realized:

NITRORINSER® has been verified by means of comparative tests to traditional rinsing systems. Test record sheet, tested bottles were contaminated with an enormous number of particles by introducing a targeted mixture of known contaminating agents:

- o extremely small size of the dust
- o glass powder
- o glass particles
- o fiber
- o insects and their body parts
- o wetting and drying the surface

industrial applications of a rinser



After rinser, residual particles found in the bottles are removed with pre-filtrated water through the membrane unit 0,2 μm . Thus, water serves as a mover of the residual particles and thuswise is again filtered through a proper white membrane with pore size 0.45 μm to make them visible on a support that is objectively examinable.

So then, the membranes that have retained particles are scanned with a spectrodensitometer obtaining precise and repetitive images in 3 viewpoints.



TESTING

Some bottles were subjected to traditional washing cycle and some bottle were washed via use of **NITRORINSER®** both by inert gas and by air.

The residual O_2 was examined with sensors that measures directly on bottles, which are covered on the bottleneck, collected and immediately analyzed.

It is evident that sampling and analytic monitoring system is attended by cryptic contamination of O_2 that, however, is practically a constant value in all samples.

RESULTS

All results obtained were in favor of the **NITRORINSER®** system, with 20 % better removing contaminant agents, high uniformity of the obtained results.

The result is very linear with atmosphere changes about 85% for limited dosages of inert gas and more 92% for larger dosages of inert gas.

Recommended inert gas values to saturate atmosphere: 1 – 1,5 volume of the treated bottle.