



HOW TO PERFECTLY CLEAN

PCBs AFTER SOLDERING

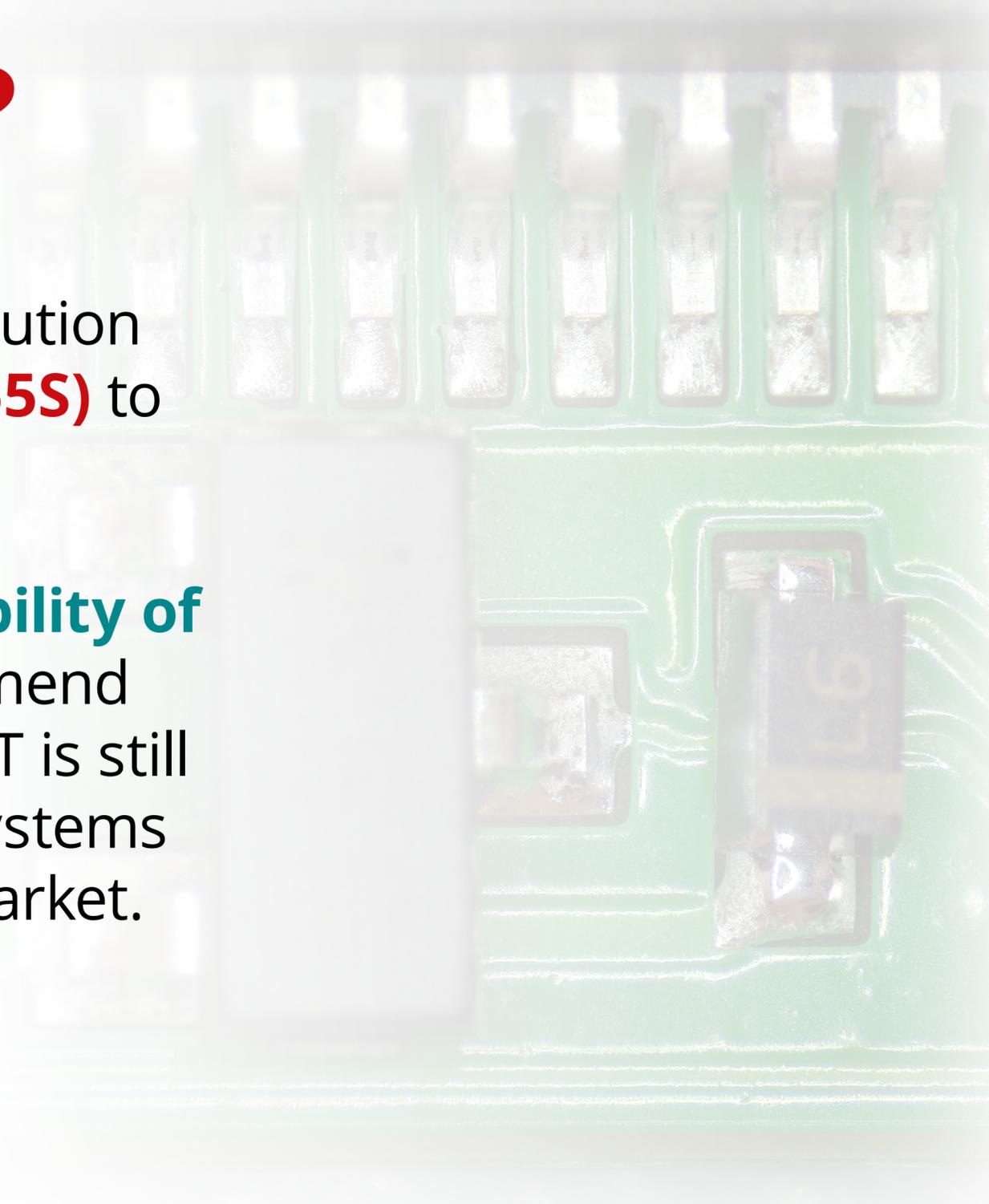
PCB CLEANING



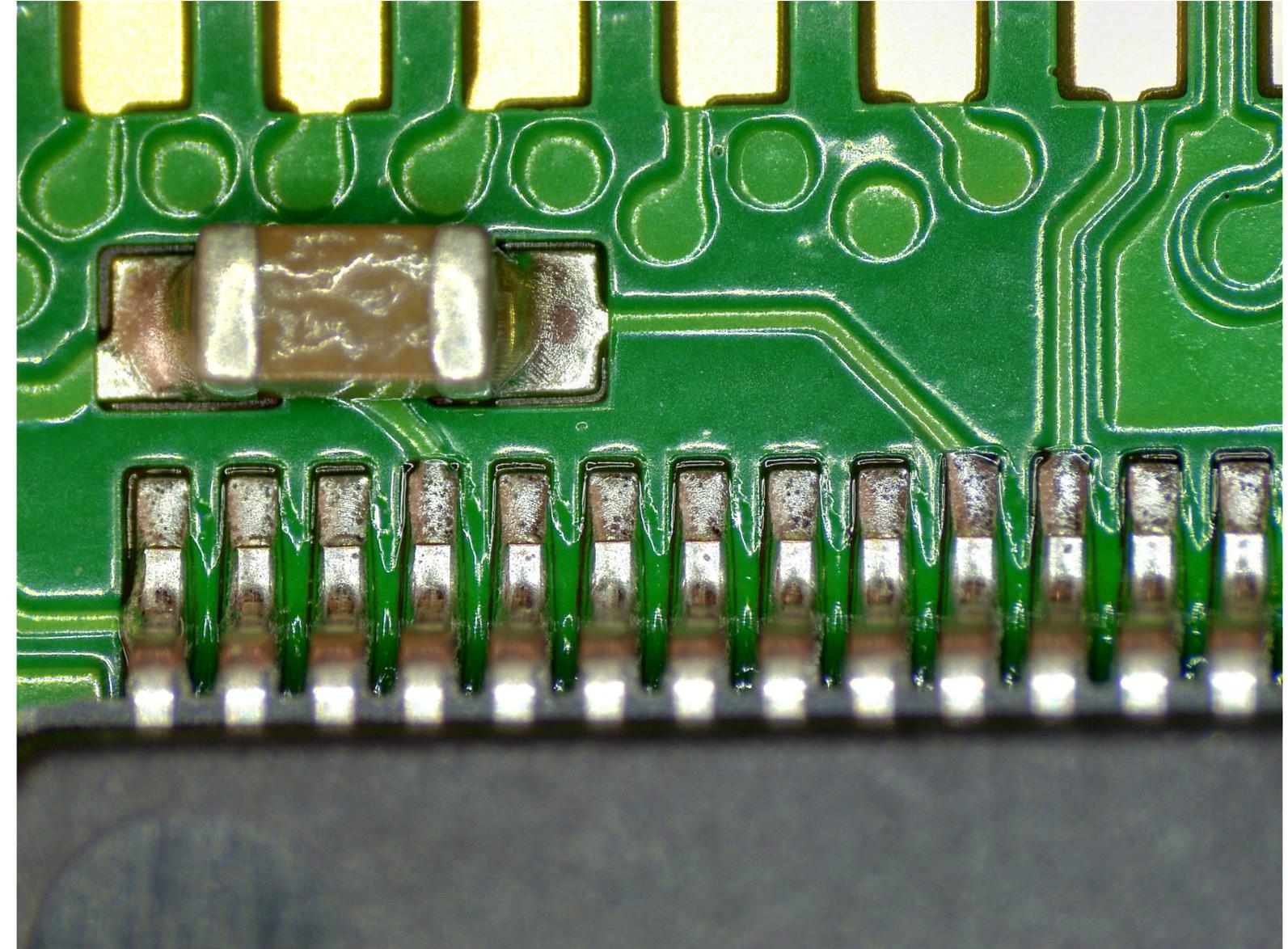
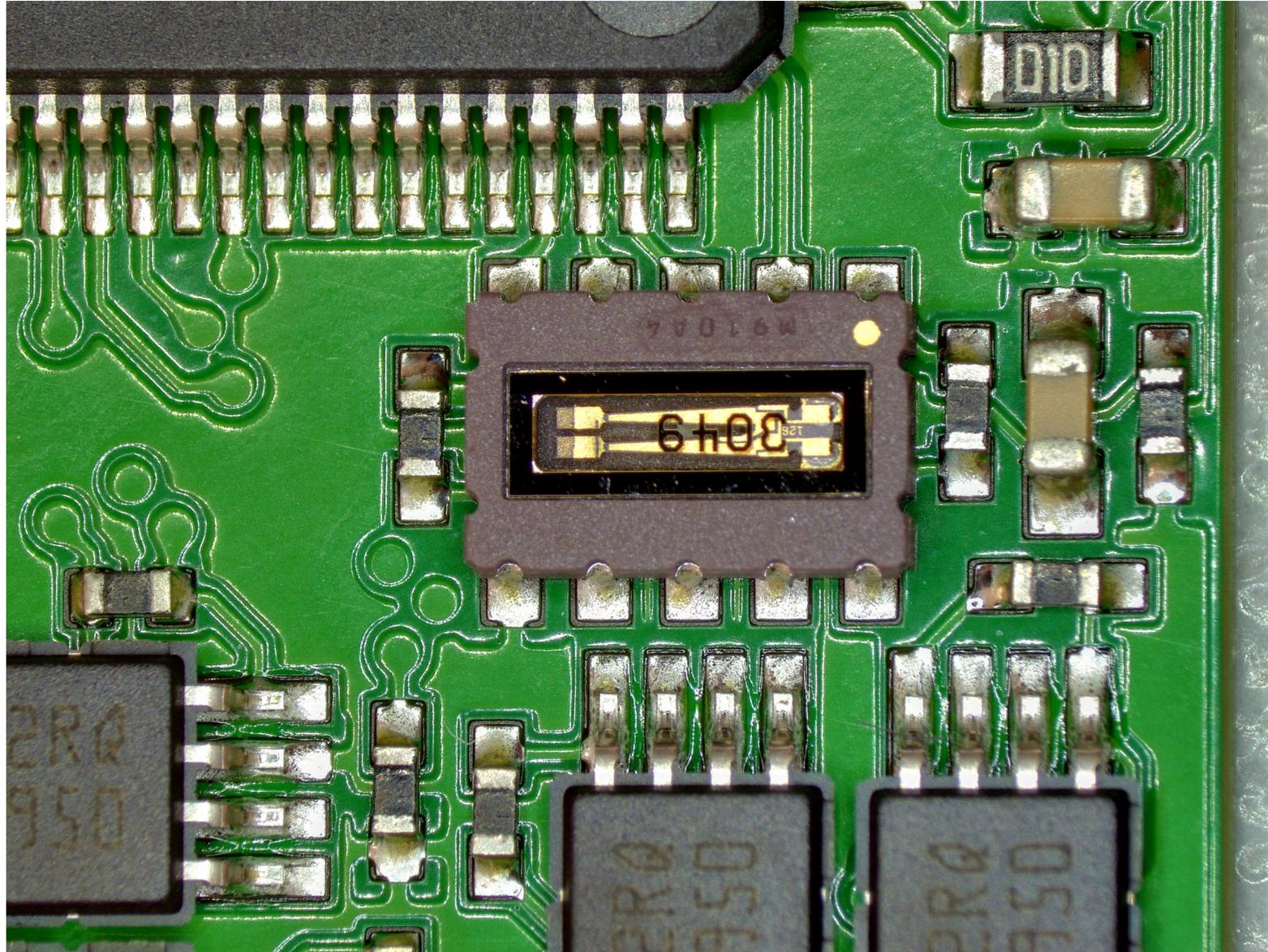
WHAT IS THE CUSTOMER'S STORY?

The customer has been using DCT cleaning solution (**InJet® 388 with cleaning fluid Decotron® 355S**) to clean PCBAs from flux residues.

However, **DCT was asked to verify the suitability of the cleaning process** and eventually to recommend other, more innovative solution for them, as DCT is still developing new cleaning agents and cleaning systems to provide the best cleaning solution on the market.



PCBAs Before Cleaning





WHAT WE TESTED?

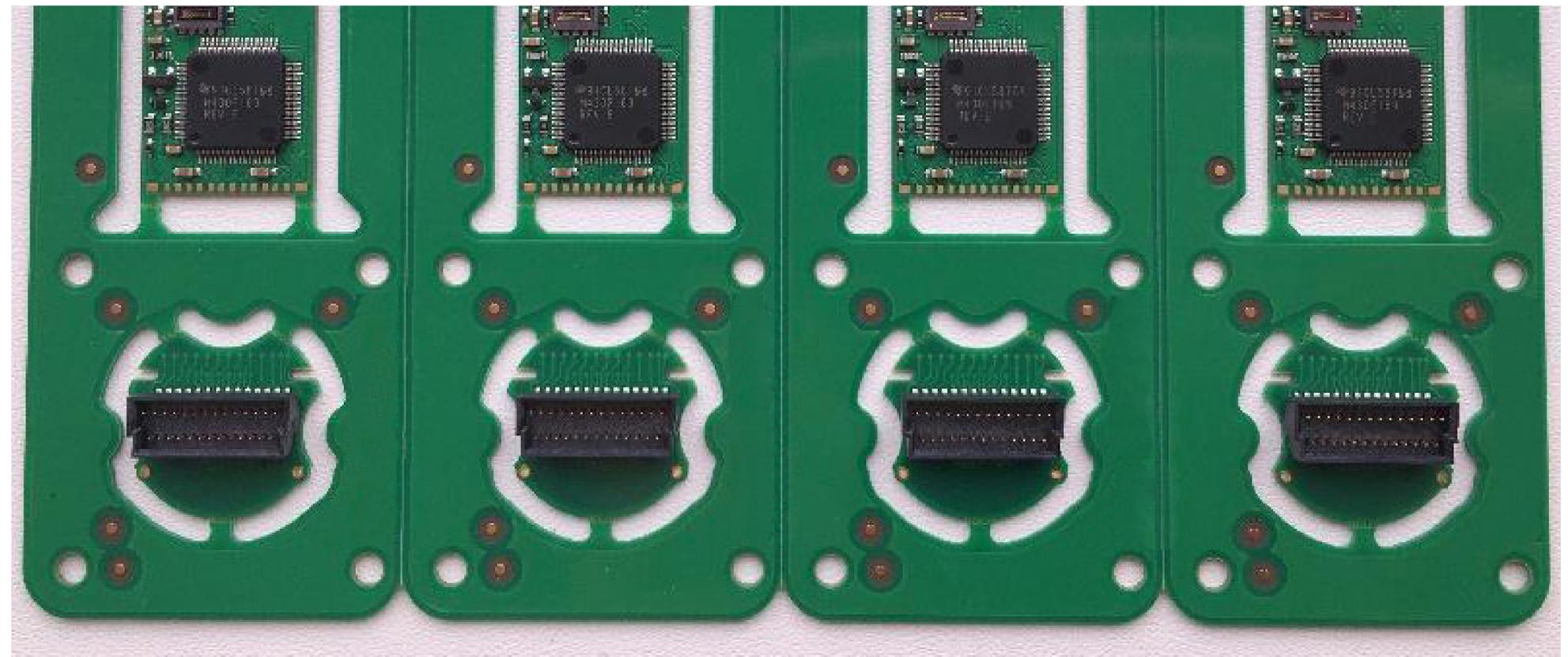
We removed **flux residues from PCBs** after soldering with another and newer DCT cleaning agent (**Decotron® CP 381**), designed for this process.

Type of Solder Paste:

ALPHA CVP-390

Type of Sample:

Pallet of PCBAs: 15,3 x 11,5 cm





COMPLETE CLEANING SOLUTION BY DCT



Technical data sheet

Water-based cleaning agent
Decotron® CP 381



Technical data sheet

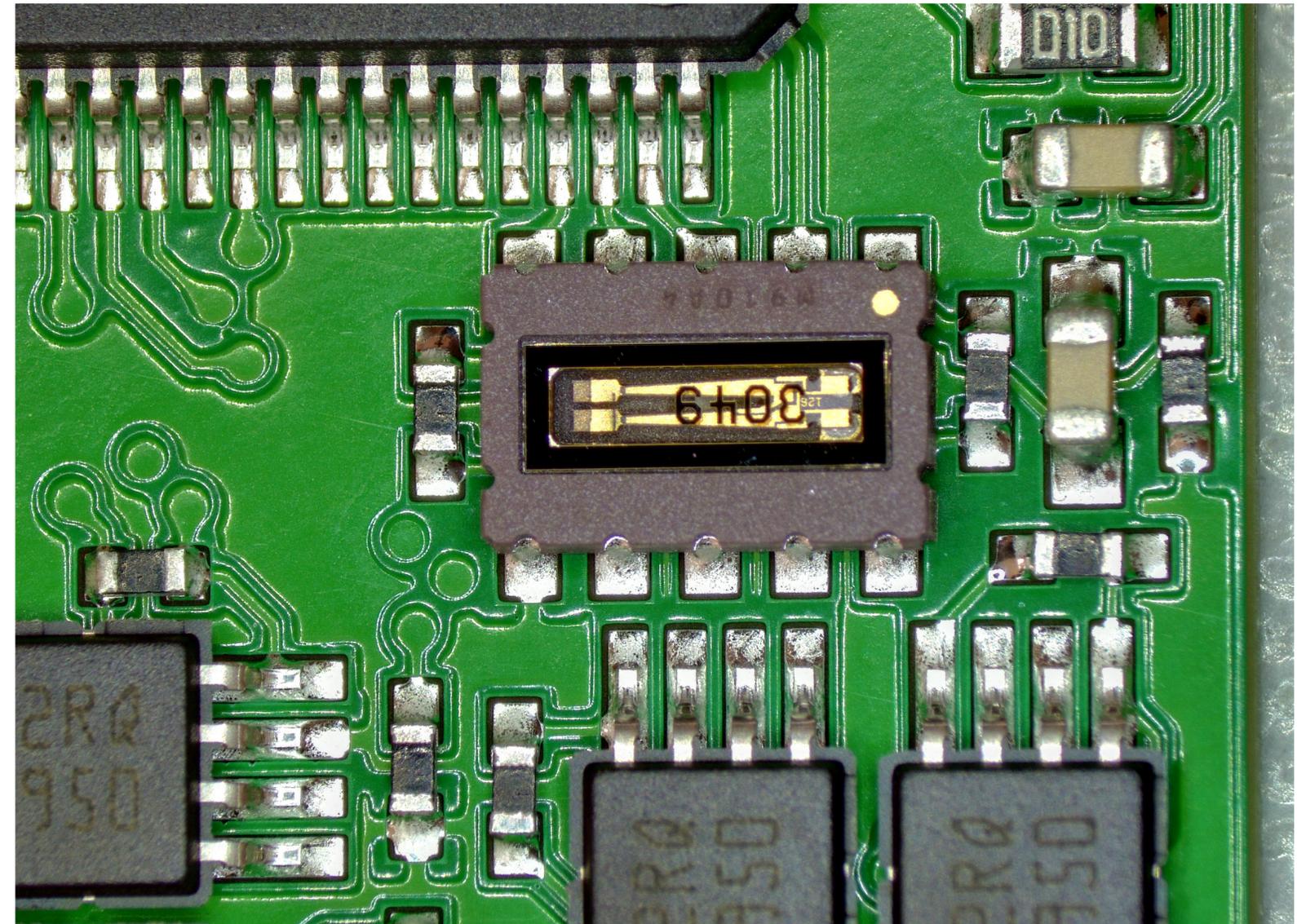
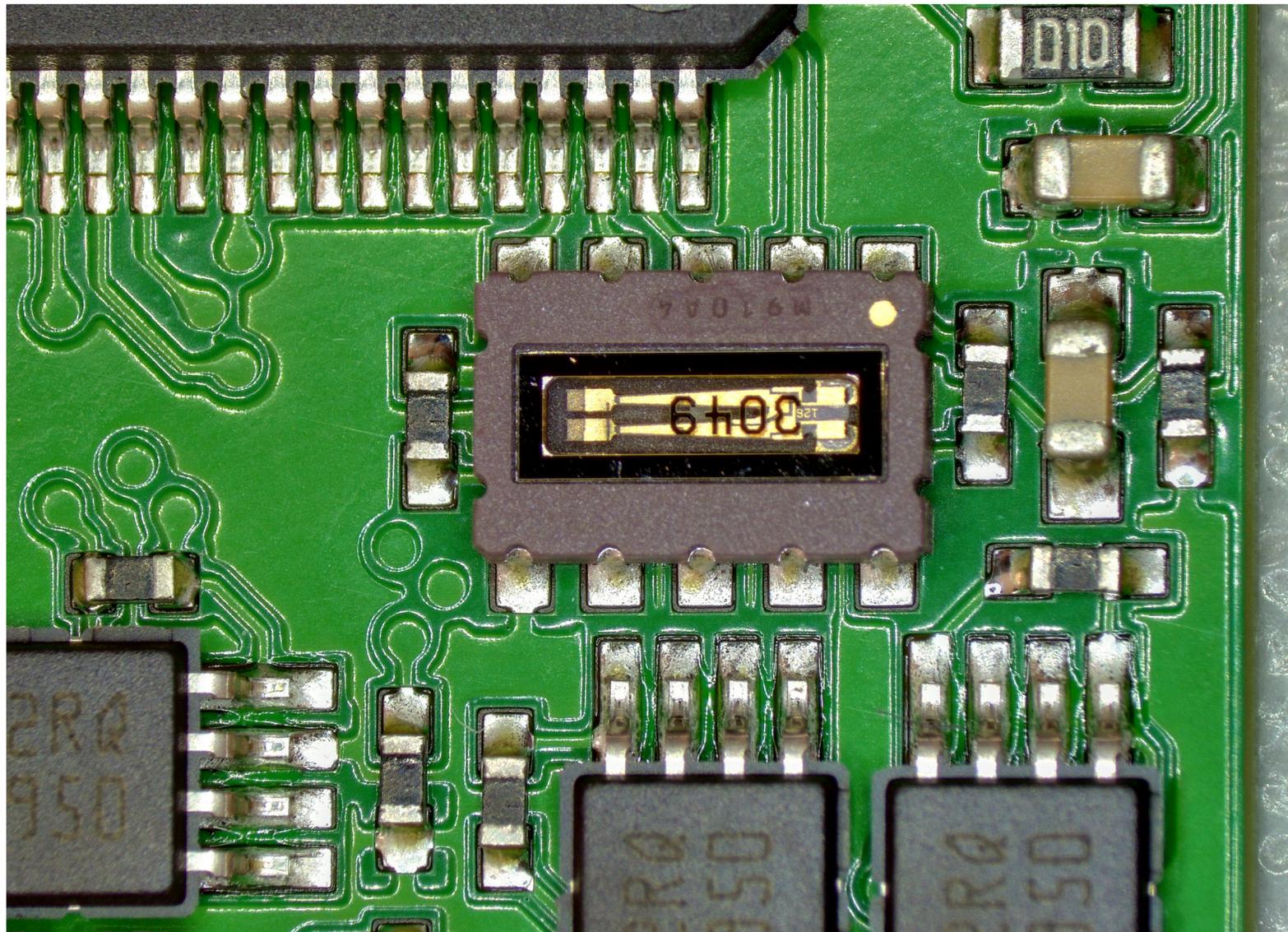


see our videoreport

Cleaning system **InJet® 388 CRD**
with external filtration

BEFORE Cleaning

AFTER Cleaning



Due to our own R&D team we are continuously developing new cleaning solutions for our customers, customized according to their needs.

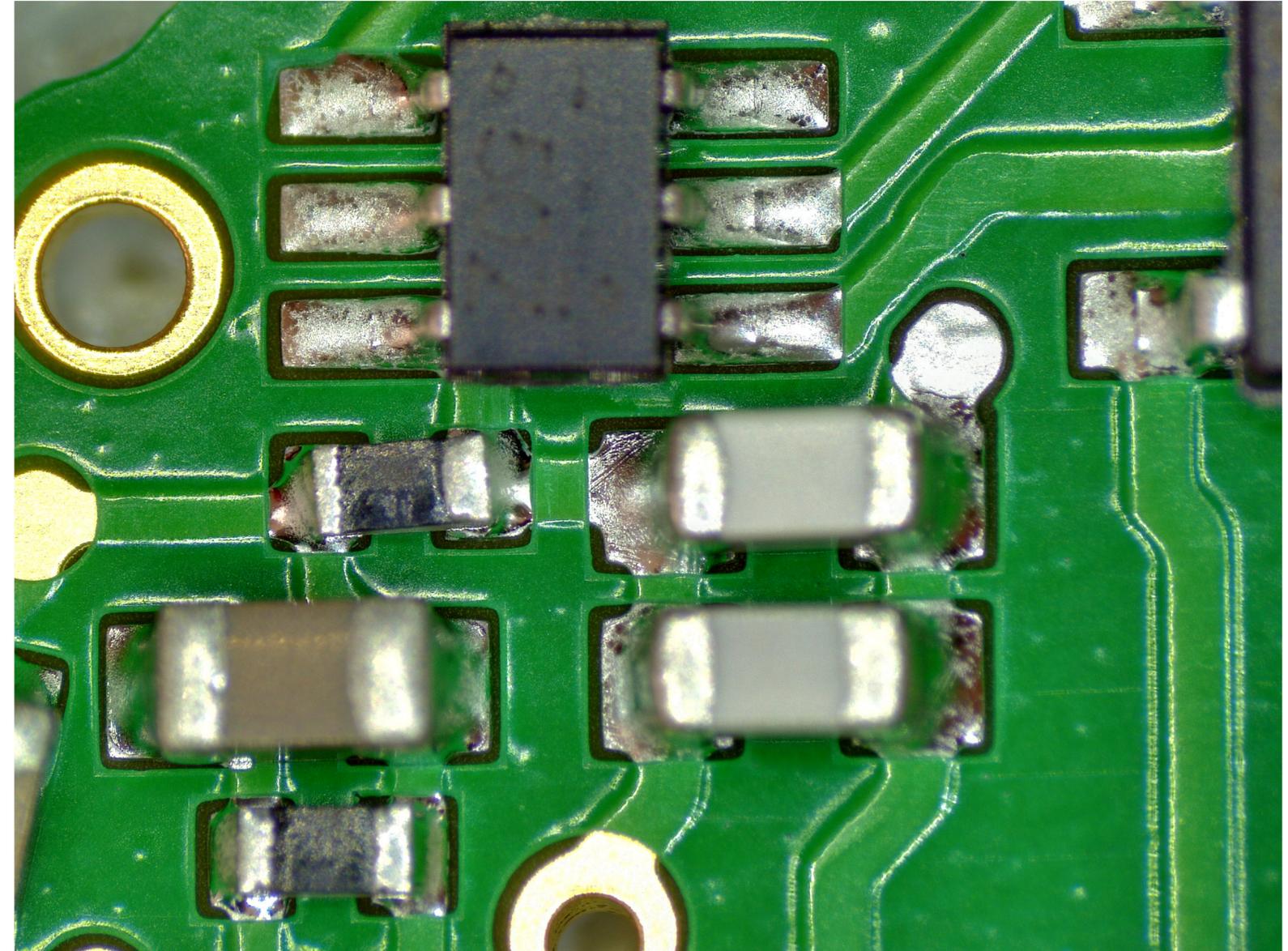
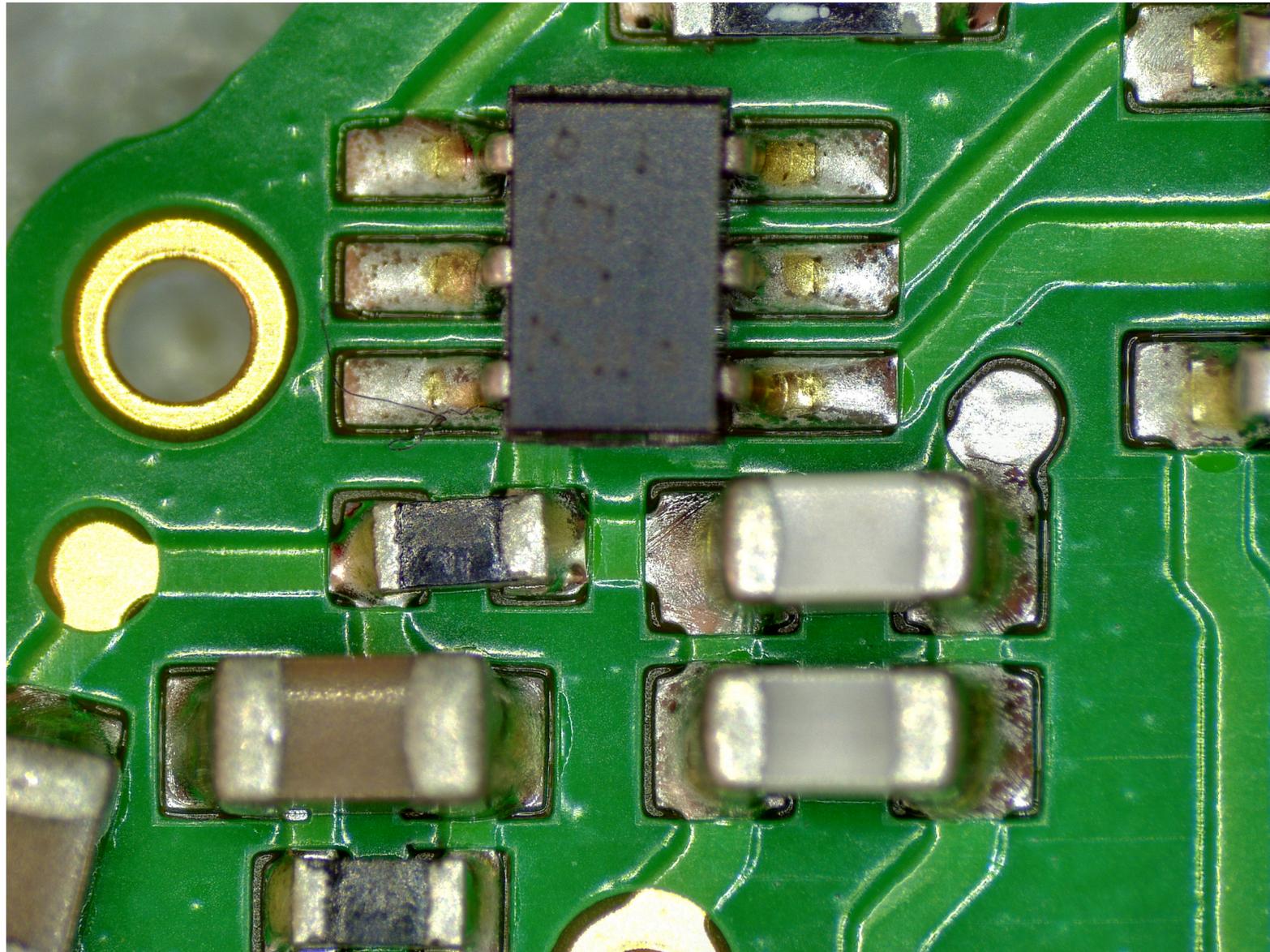


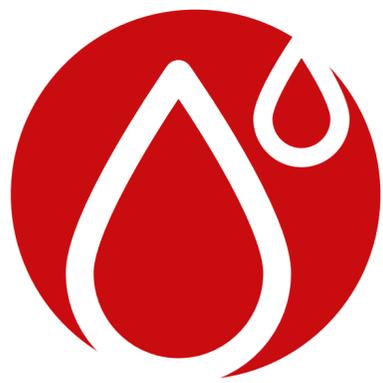
DCT has also its own production, where all cleaning systems are manufactured.

BEFORE Cleaning



AFTER Cleaning





RECOMMENDED CLEANING PROCESS

Cleaning system:

Decotron® CP 381 / 15 min / 50°C

Drip: 120 s

Rinsing:

DI Water / 7 min / 40°C / 1 µS

Drip: 90 s

Drying: hot air / 10 min / 80°C



15 minutes is a time, which was needed **to completely clean flux residues from PCBs after the soldering process.**

*Flux residues were removed from most components in **only 5 minutes**, but one chip component with a small gap between solder joints and solder mask needed another 10 minutes to **get 100% clean***



IONIC CONTAMINATION TEST

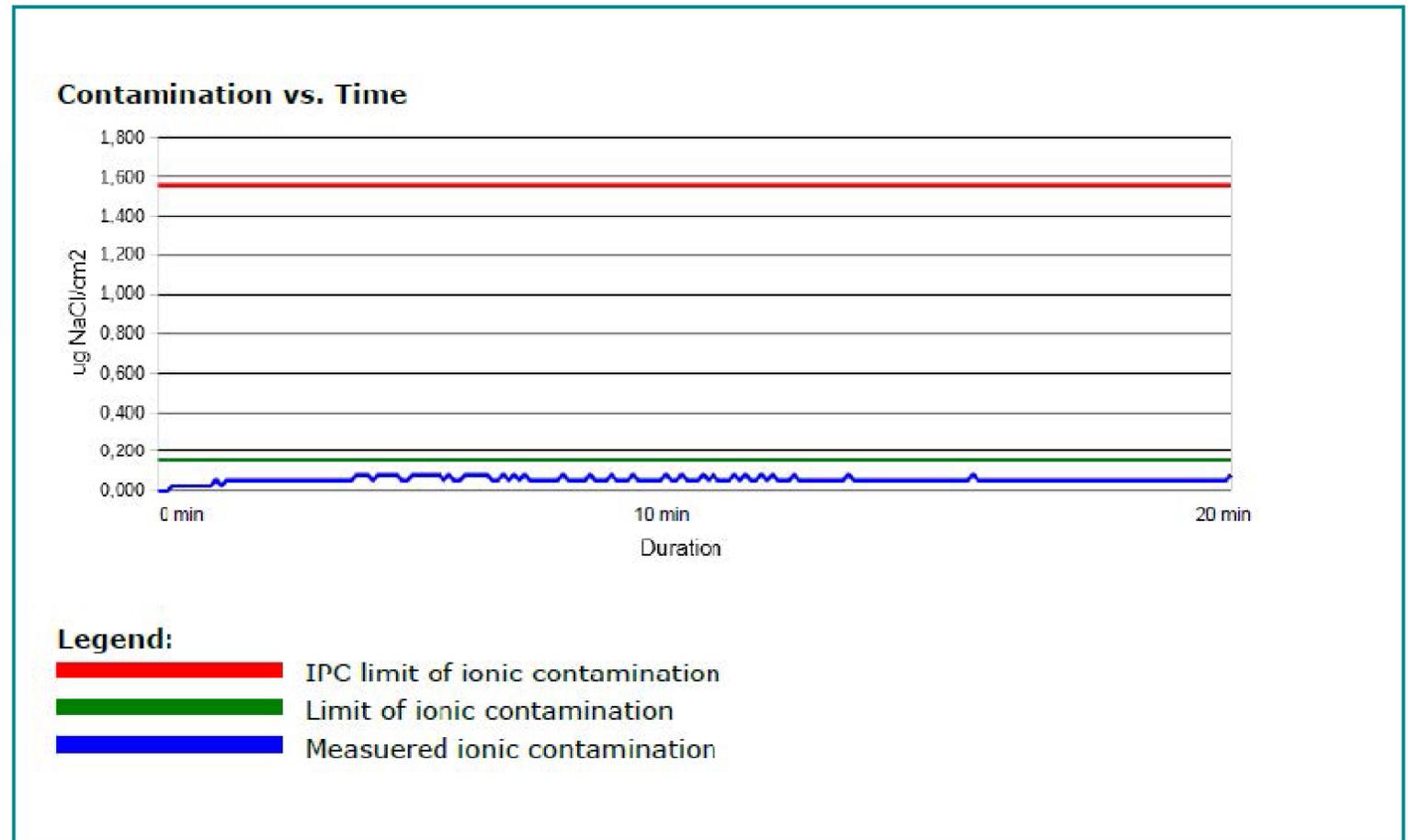


Technical data sheet

Cleanliness is checked in our **ROSE tester**

It is a device designed to measure the amount of ionizable impurities of a PCB.

The result of measured ionic contamination (blue line) of cleaned PCB is 0,08 $\mu\text{g NaCl}/\text{cm}^2$.



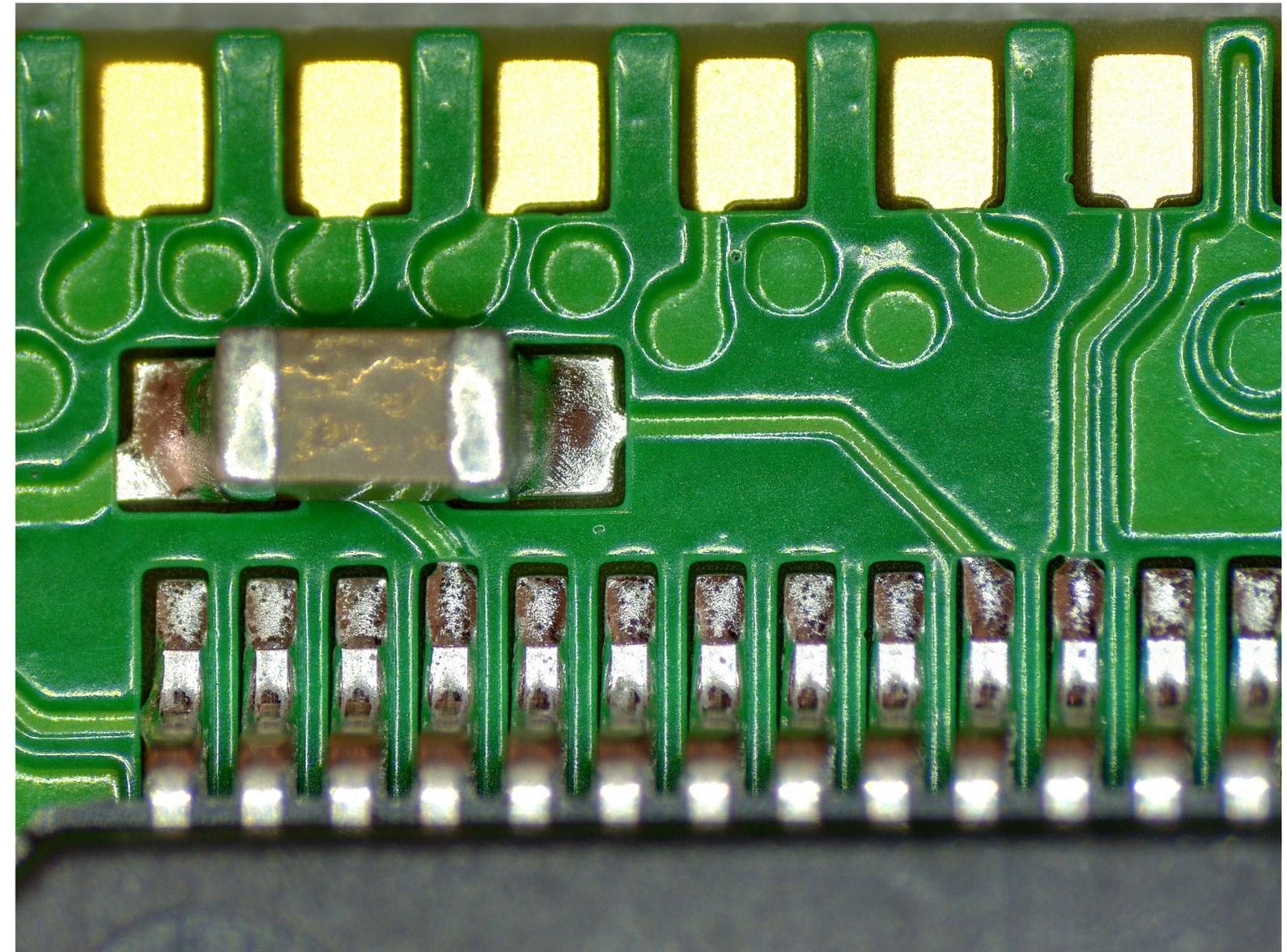
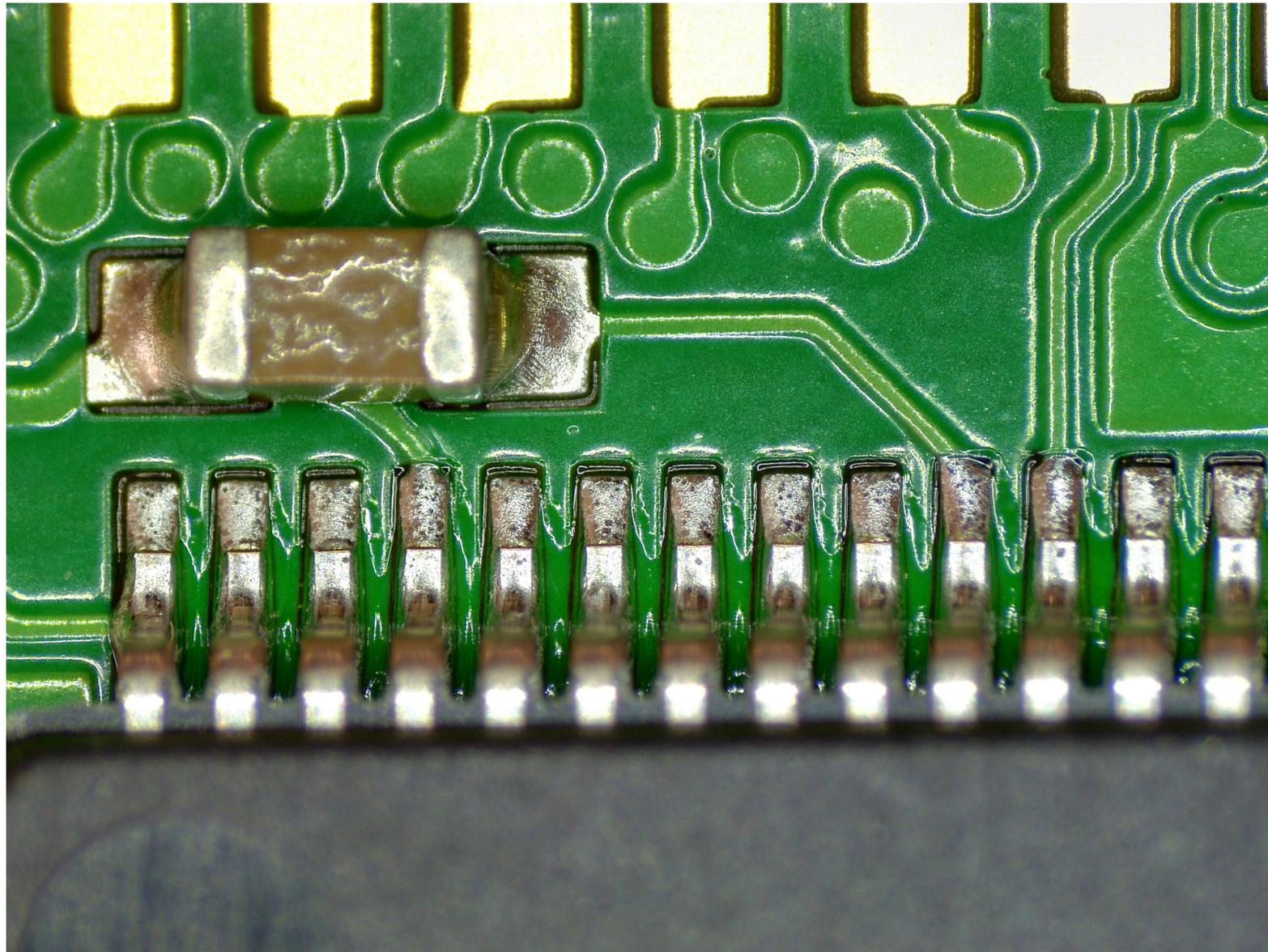
IPC limit of ionic contamination (*red line*) corresponds to **1,56 $\mu\text{g NaCl}/\text{cm}^2$.**

Limit of ionic contamination (*green line*) is an option to enter your own limit – in this case the limit was set to **0,156 $\mu\text{g NaCl}/\text{cm}^2$.**

BEFORE Cleaning



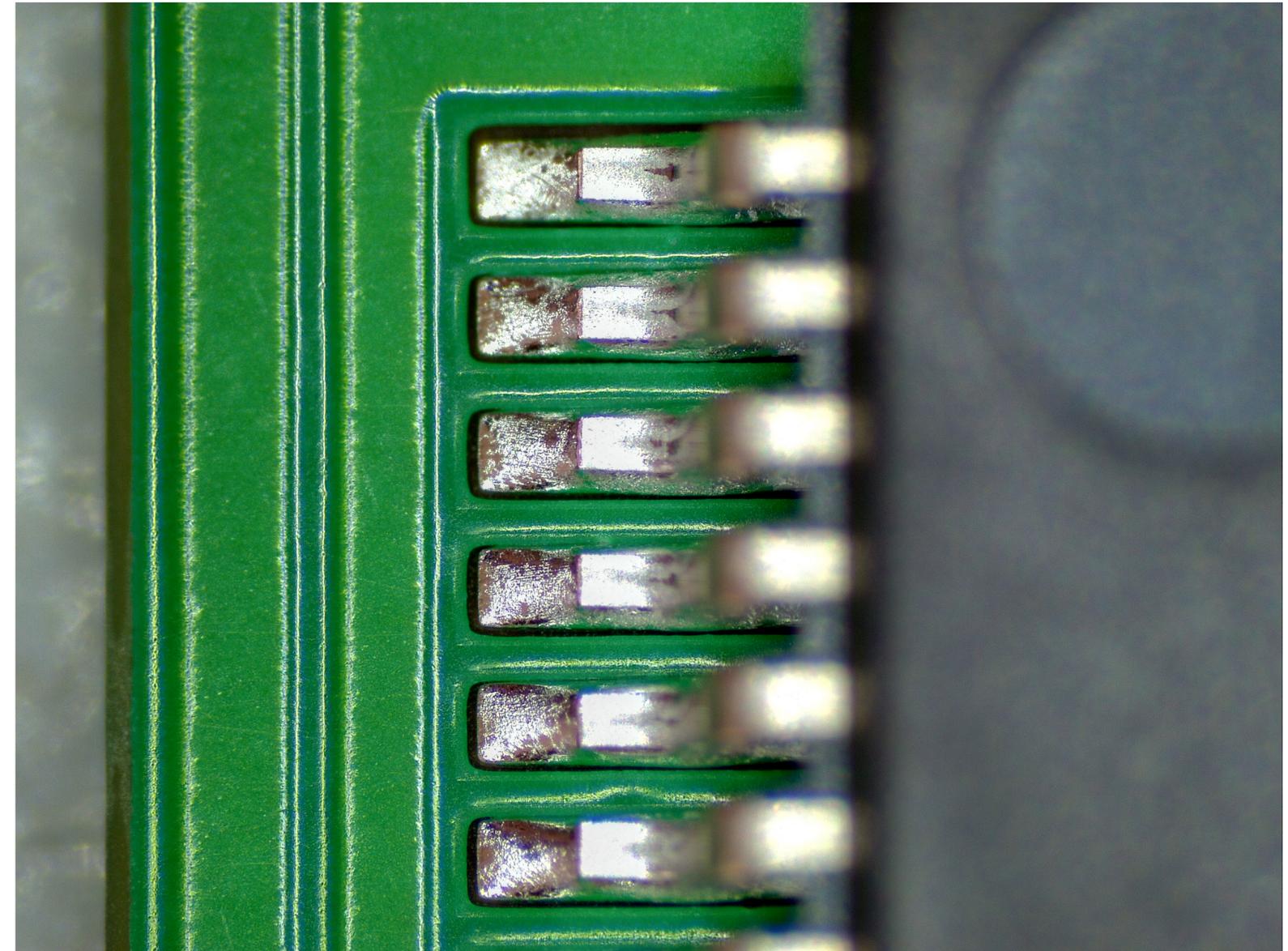
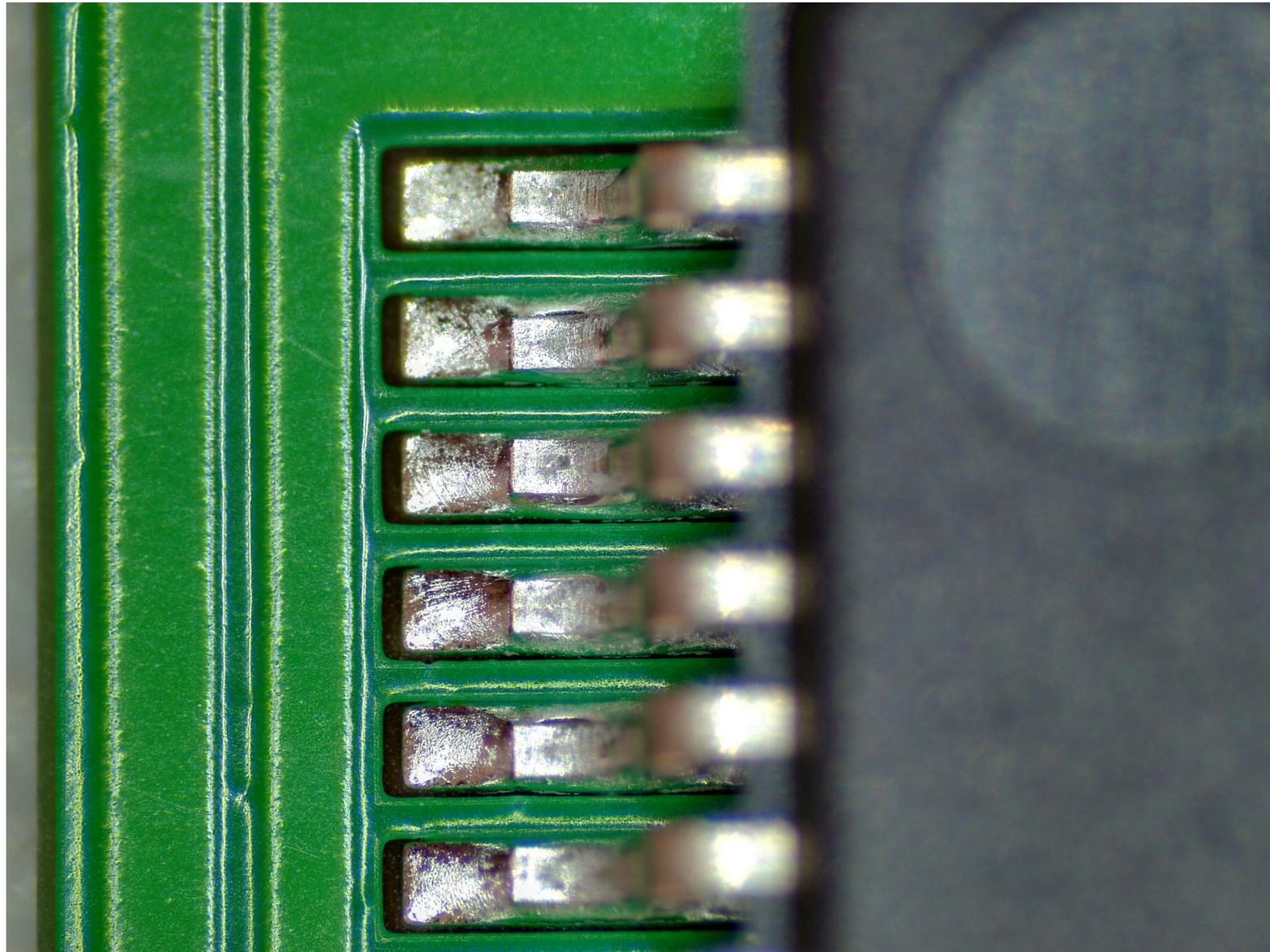
AFTER Cleaning



Critical Component AFTER 5 min



AFTER 15 min





RECOMMENDED CLEANING AGENT

Decotron® CP 381



Technical data sheet

- ✓ Water-based cleaning agent
- ✓ Determined to clean **flux residues after soldering and misprints**
- ✓ Ready-mix, intended for direct use
- ✓ Compatible with all types of cleaning systems
- ✓ Recommended for high pressure **Spray-In-Air cleaning systems**



RECOMMENDED CLEANING SYSTEM

InJet® 388 CRD

with high pressure Spray-In-Air technology

- ★★★★ **STENCIL, MISPRINT, SQUEEGEE** cleaning
- ★★★★ **PUMPRINT** cleaning
- ★★★★ **CONFORMAL COATING** removing
- ★★★★ **PCB** cleaning



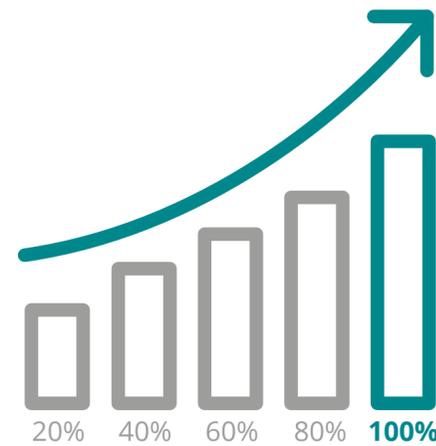
*The same results can be achieved also with using other cleaning machines of InJet® 388 type (**388 CRD-2PR, 388 CRRD-1PR, 388 TWIN CRRD-1PR**). It depends always on the customer's specific requirements and needs.*



Technical data sheet



see our videoreport



RESULTS OF TESTING

Success rate: 100%

Decotron® CP 381 was evaluated as **the best cleaning agent for removal of flux residues** from PCBAs, based on a cleaning test and ionic contamination test, which we have done for the customer at DCT DEMO center. We are always customer-oriented and **we are always willing to verify the suitability of currently used cleaning solutions.** We are more than happy to recommend better and newer cleaning solution as it was in this particular case study.