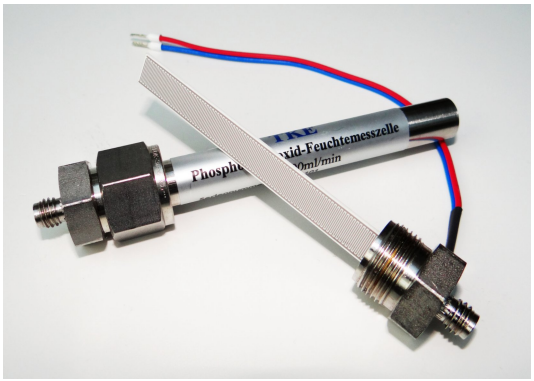
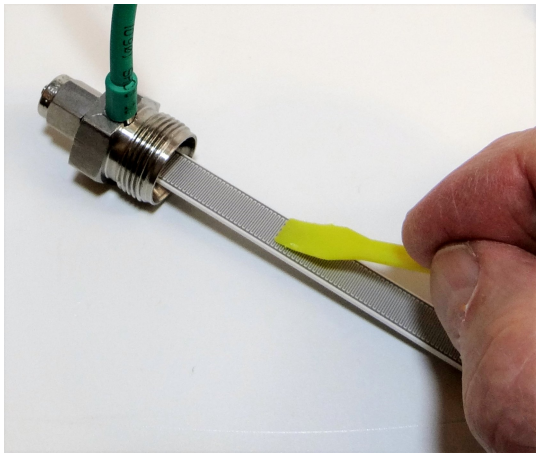
Cleaning and Recoating the TKE Electrolytic Cell

Over time contamination of the sensor and degradation of the active sensing layer may occur. This manifests itself in the decline of the sensitivity of the cell. Cleaning and recoating the electrode is recommended. Proceed as follows:

1. Open the sensor on the cable gland and carefully pull the electrode out of the tube.
2. Clean the inside of the tube with a suitable solvent and dry the tube carefully. A warm-up in the oven at up to 50 °C can be helpful to remove moisture from the inner walls.
3. For regeneration, hold phosphoric acid 85% and acetone p.A. ready.
4. Prepare a solution of 80% acetone and 20% phosphoric acid.



5. Carefully clean the sensor surface with a Q-tip that you previously dipped in acetone. Repeat the process until no residues are visible on the sensor.
6. Using a scalable pipettor, draw a volume of 30 µL of the acetone / phosphoric acid mixture.
7. Apply the content of the pipette onto one sensor side.



8. Using a spatula carefully distribute the liquid evenly over the sensor surface.
9. Repeat step 6 to 8 on the other side of the sensor.
10. Now gently insert the sensor into the tube and close the Swagelok fitting.
11. Flush the sensor with dry gas for several hours – preferably over night – before applying the operating voltage.
12. Apply the voltage and wait for the sensor signal to settle to a stable value. It is recommended to limit the current to 10 mA during the initial dehydration to preserve the fresh coating.
13. Now the sensor is ready for measurement.

TKE Regeneration Services

Instead of regenerating the cell yourself, you can also revert to TKE services:

- Cell exchange: Get a fresh cell in dry condition, ready for measurement, including test report in exchange to the used cell.
- Maintenance contract with fresh cells held available.
- Consumables and tools for the regeneration.

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