



IonPolarization System



The physical-galvanic water treatment

IPS KalyxxBlueLine Technical sheet



TEST REPORT

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Report Number: 2475-17001

Report Issued: September 29, 2017 **Project No.:** 28587

Client: Swiss Aqua Technologies SK s.r.o.,
Obereggerstrasse 50,
Berneck, Switzerland, CH-9442 **Contact:** František Pancurák

Source of Samples: The sample was supplied by the manufacturer, and the testing was witnessed by and IAPMO lab personnel, Robert Schut, at the manufacturer's laboratory.

Date of Testing: August 29, 2017 to September 14, 2017.

Test location: Šebastovska 2, 080 06 Prešov, Slovakia.

Sample Description: IPS Sirius water softener.
Model No.: IPS Kalyxx.

Scope of Testing: The purpose of the testing is to determine if the tested sample of the water softener, IPS Kalyxx, reduces the limescale deposit on the surfaces of heating elements of water heaters per Test Protocol by Swiss Aqua Technologies SK s.r.o.

Conclusion: See results

Tested by,

Robert Schut, Project Specialist

Reviewed by,

Sean Vuu, P.E., Manager, Specialty Projects



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Test procedure (see Test Protocol from Swiss Aqua Tech, attached at the bottom of the report).

Each tank of 50 liters capacity, filled with 45 liters of water, as follows:

- Line 1) Stainless steel heating element, without water softener (untreated)
- Line 2) Stainless steel heating element, with IPS Kalyxx device.
- Line 3) Copper heating element, without water softener (untreated).
- Line 4) Copper heating element, with IPS Kalyxx device.

Note: Lines 2 & 4 were connected to the same IPS Kalyxx device (by a Tee).

During a period of 11 days, 4 times per day (at 8 AM, 11 AM, 1 PM and 4 PM), a 30 liters of water each time was drained and refilled simultaneously. Except the 2 weekend days, only 3 water exchanges were done (at 8AM, 12PM and 4PM).

Before each water draw, the hot water temperature was measured and registered, average of 65.2°C (min: 65.0°C / max: 65.5°C). During each water refill, the cold water temperature was measured and registered, average of 17.2°C (min: 16.9°C / max: 17.7°C). On daily basis, the water hardness was verified and registered, average of 17.9° dH (min: 17.51° dH / max: 18.06° dH).

At the end of the 11-day test, the heating elements were left drying and then taken out from the tanks. The lime scale, which was attached to the heating elements, were mechanically scraped off and weighed.

Finding:

Line number	1	2	3	4
Weight of deposited limescale (g)	0.7133	0.1759	4.7843	1.1336

From these results, it's concluded that the IPS Kalyxx reduced 75.3% limescale deposit on stainless steel heating element, and 76.3% limescale deposit on copper heating element.