PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

Platinum QLS Refrigerated Sampler & Platinum CVE Refrigerated Sampler

Manufactured by:

Teledyne ISCO
4700 Superior Street
Lincoln, Nebraska
68504-1398
USA

has been assessed by Sira Certification Service
And for the conditions stated on this certificate complies with:

MCERTS Performance Standards for Continuous Water Monitoring Systems, Version 4 dated April 2017 & EN16479:2014

Certification Ranges :

0 to 8.5m

Project No.	:	70171503
Certificate No	:	Sira MC180338/00
Initial Certification	:	14 December 2018
This Certificate issued	:	14 December 2018
Renewal Date	:	13 December 2023

Emily Alexander
Environmental Project Engineer

MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
Tel: +44 (0)1244 670 900

Form 1335
Issue 5

Certificate Contents

Approved Site Application

Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency Monitoring Technical Guidance Notes available at www.mcerts.net

The product is suitable for use on applications for compliance with the Urban Wastewater Treatment Regulations.

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

- Platinum DVPR Test Report version 1 dated 13/07/2018
- WRc Witness test report: UC13500, dated November 2018

Product Certified

The measuring systems consists of the following parts:

- Vacuum Sampler Controller
- Vacuum Pump
- Sample Chamber Assembly
- Sample Bottle Turntable
- Modular Refrigeration System

This certificate applies to all instruments fitted with software version C78 (serial number 218A01987) onwards.

Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -10°C to +40°C
Instrument IP rating: IP66

Tests conducted on QLS sampler model and results are expressed as error % of certification range unless otherwise stated.

Test	Results		MCERTS specification
Sample Collection	Flow proportional and timed sampling available Certified for use with 24 x 1-litre PP, 12 x 2.5-litre PP, 4 x 15-litre PP, 1 x 20-litre PE, 1 x 10-litre PE or glass bottles		Clause 3.1.2
Sample interval • Time proportional sampling • Flow proportional sampling	Variable and fixed pulse flow intervals available - 1 to 9,999 flow pulses and 1 to 9,999minutes in 1-minute increments		Clause 3.1.2
Sample failure	Sample failures are recorded. Alarm system indicates failures on display		Clause 3.1.2
Sample line diameter (internal)	3/8 in. 9mm diameter ½ in. 12mm diameter		Clause 3.1.2 >9mm
Sample volume	Sample volume adjustable over the range 20 to 500ml in 1ml increments		Clause 3.1.2
Maximum volume of a discrete sample that can be set Total storage capacity both by numbers and volumes of individual bottles and in a composite container	9,990 ml		Clause 3.1.2
Maximum sampling head	8.5 meters		Clause 3.1.2
Sampling volume error a) Time Proportional for the QLS sampler	U* 1m 0.87% 4.5m 0.7% 8.5m 1.25% Average: 0.94%	X* 1m -1.35% 4.5m -1.13% 8.5m -0.96% Average: -1.15%	Clause 6.4.1.1 <5% Note 1

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Test	Results		MCERTS specification
Sampling volume error a) Time Proportional for the CVE sampler	U* 1m 0.49% 4.5m 0.46% 8.5m 0.57% Average: 0.51%	X* 1m -0.69% 4.5m 0.08% 8.5m -0.60% Average: -0.40%	Clause 6.4.1.1 <5% Note 1
Sampling principles a) CVVT impulse	0.00%		Clause 6.4.2.3 <±1%
Sampling principles	All available sampling principles were tested. Clause 6.4.2.2 was fulfilled using data from 6.4.1.1.Both clause 6.4.2.4 and 6.4.2.5 were fulfilled. No significant timing errors were seen.		Clause 6.4.2.2, 6.4.2.4 & 6.4.2.5
Sample line velocity	3/8-inch suction line: 2.04m/s at 1m sampling head 2.23m/s at 2m sampling head 1.92m/s at 3m sampling head 2.09m/s at 4m sampling head 1.92m/s at 5m sampling head 1.68m/s at 6m sampling head 1.52m/s at 7m sampling head 1.33m/s at 8m sampling head 1.18m/s at 8.5 sampling head	½- inch suction line: 1.74m/s at 1m sampling head 1.85m/s at 2m sampling head 1.61m/s at 3m sampling head 1.78m/s at 4m sampling head 1.62m/s at 5m sampling head 1.48m/s at 6m sampling head 1.33m/s at 7m sampling head	Clause 6.4.3 >0.5m/s
Supply voltage *AC (207VAC to 253VAC)** *Tested ranges	7 to 8.5 metre – >1.169 m/s (lowest velocity)		Clause 6.4.4 >0.5 m/s Note 2
Sample integrity	No statistically significant difference found in the analysis for suspended solids, total N, total P, BOD5 and COD		Clause 6.4.5 Annex B5
Sample timing error	4 sec/24hr		Clause 6.4.6 < ±10 sec/24hr
Sample temperature control a) Volume for the QLS Sampler	U* -10ºC 0.78% +40ºC 0.74%	X* -10ºC -2.27% +40ºC -2.3%	Clause 6.4.7.2 ±5%

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Test	Results		MCERTS specification
Sample temperature control a) Volume for the CVE sampler	U* -10ºC 1.19% +40ºC 0.46%	X* -10ºC -2.16% +40ºC -1.06%	Clause 6.4.7.2 ±5%
Sample temperature control b) Temperature	During sample period: -10ºC at +4.65ºC +20ºC at +4.96ºC +40ºC at +4.71ºC	24hrs after sample period: -10ºC at +2.33ºC +20ºC at +2.74ºC +40ºC at +2.33ºC	Clause 6.4.7.3 Maintain sample between 0ºC to +5ºC Annex B7

Note 1: *U: Expanded uncertainty, *X: Mean error

Note 2: Certification only covers AC power supply

Description

The Platinum Refrigerated Vacuum Sampler consists of a fiberglass enclosure, controller, vacuum pump, sample chamber, sample bottle turntable, and a refrigeration module.

The refrigerator cabinet enclosure is constructed from heavy duty UV resistant fiberglass and is insulated with 2.5-inch (6.35cm) insulation. The controller provides user programmable sampler features via a keypad and display. The pump is a piston vacuum pump for pulling up samples to the sampler. The sample is transported by 3/8-inch or ½-inch I.D. PVC or PTFE lined suction line.

The PVC plastic sample chamber is for collecting and measuring the sample before discharging into the sample bottle. The sample bottle turntable is a slide-out turntable which holds the sequential sample bottles and it is constructed of stainless-steel components.

The modular refrigeration system utilizes a 1/3hp compressor running on R134a refrigerant and is independently controlled by a thermostat located on the module. The refrigeration system is enclosed in a structural foam plastic case and is powered by 230Vac 50 Hz.

The Platinum refrigerated sampler features two kinds of sampling methods:

The PLATINUM QLS has a patented Quick Lift Sampler (QLS) system that uses a load cell to precisely weigh each sample and it self-calibrates to maintain the programmed sample size.

The PLATINUM CVE has a Consistent Volume Extraction (CVE) system, and it trims each sample to the same user adjustable sample volume.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule V00 for certificate No. Sira MC180338/00

2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.

3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.

4. This document remains the property of Sira and shall be returned when requested by the company.