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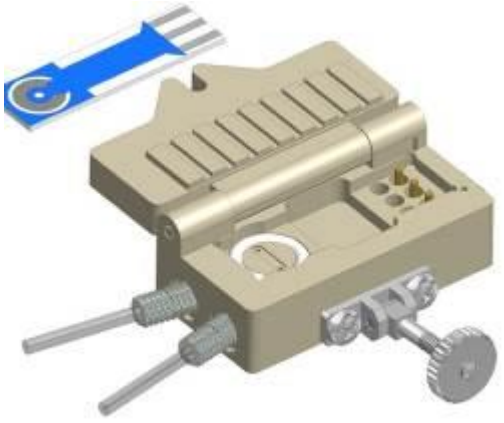
PEEK FLOW CELL

Type: FC4.TL.*

Description



The FC4.TL flow cell is made of PEEK. It has teflon endings permitting a fully compatible connection to chromatography tubing. The flow cell enables the use of sensors in a flow through arrangement. The flow arrangement is **Thin layer cell "TL"** for AC1, AC2, CC1, CC2 and CC3 sensors. The sensor is inserted into the slit of cell and tightened by closing of the door. The cell ensures the wall-jet flow around the working electrode and it is optimised so that no air bubbles cumulate in the cell. The cell contains also the contact and output cable.

Cell Materials

Polyether ether ketone (PEEK)

Tube connection

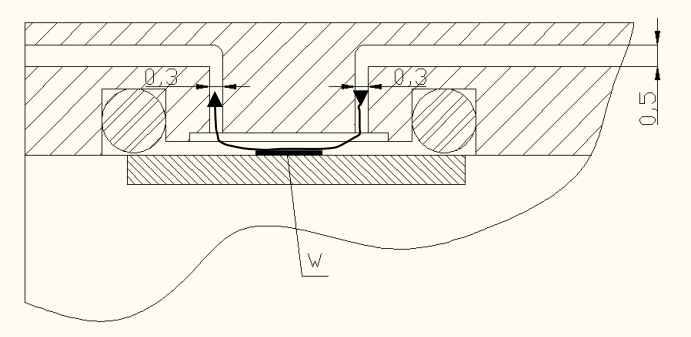
Tube fittings: Ministac 062
Tube length: 90 cm
Tube I.D.: 0.012"
Tubing is included

Physical Parameters

Dimensions:
Weight: 11 gms
Length: 42 mm
Width: 24 mm
Thickness: 16 mm

Flow Arrangement - Thin layer cell „TL"

The dependence of current on flow is in Matsuda[5]



The volume which is in contact with sensor: 5.4 microliter
The volume of input/output tubes: 3.5 microliter
Total FC2 flow cell volume: 9 microliter

Experimental Accessories

- Peristaltic Pump PP.M
- Linear Pump LP

Cell Usage

- Flow measurement[3]
- Flow-injection analysis[4]

References

1. J. Yamada, H. Matsuda, Limiting Diffusion currents in hydrodynamic voltammetry III. Wall jet electrodes, *Electroanalytical Chemistry and Interfacial Electrochemistry*, 44, 1973, 189-198
2. R. Dworak, H. Wendt, Hydrodynamics and Mass Transfer within the Cylindrical Capillary Gap Electrolysis Cell, Berichte der Bunsen-Gesellschaft 80 (1976) 77-82
3. J. Krejci, L. Jezova, R. Kucerova, R. Plicka, S. Broza, D. Krejci, The measurement of small flow, Sensors and Actuators A 266 (2017) 308-313
4. J. Krejci, R. Sejnohova, V. Hanak, H. Vranova, Screen Printed Electrodes with Improved Mass Transfer, New perspectives in biosensors technology and applications (2011) 291-311
5. Matsuda,H., J. Electroanal. Chem. 15, 325, (1967)

Ordering Information

- The order is specified by whole product code
- Minimum order quantity – 1 flow cell
- Delivery time for standard FC4.TL cell is 4 weeks from receipt of order
- Delivery time for non-standard FC4.TL cell depends on final technical specification of order

Flow cell ordering formula

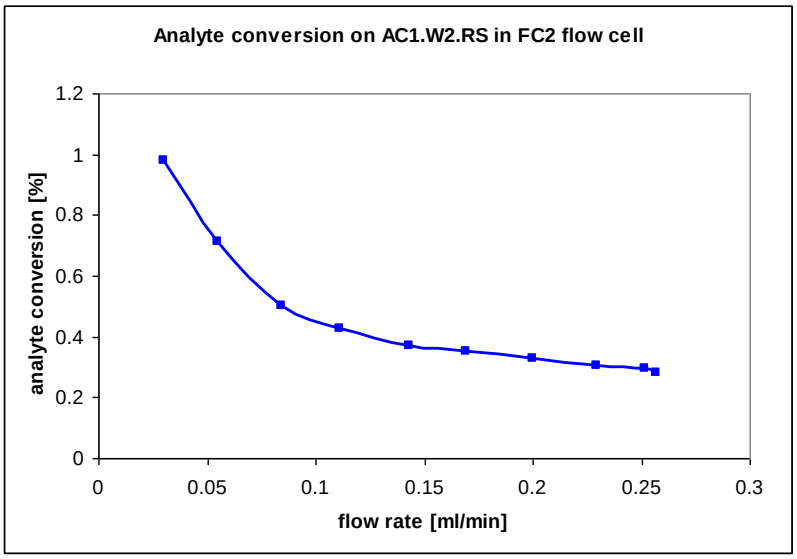
FC4.TL.* (Flow cell)

F - Flow	**2 - 7 poles BVT connector**
C - Cell	**3 TRIAD - (Triad01 PalmInstruments)**
4 - Cell reference number (PEEK)	**3 LEMO4 - (4 pins PalmInstruments)**
TL - Thin layer	**3 LEMO5 - (5 pins PalmInstruments)**
*** - Termination**	**4 - BNC connectors**
S - Single conductors	**5 - Banana plugs (2 mm), 1.5 m cable**
1 - Banana plugs	**6 - Banana plugs (2 mm), 0.2 m cable**

Types of Termination (Three shielded core cable)

Model	Termination	Evaluating Units
FC4.TL.S	Single conductors	any device
FC4.TL.1	Banana plugs 4mm	any device
FC4.TL.2	7 poles BVT connector	any device
FC4.TL.3 TRIAD	Triad01 PalmInstruments	Palmsens, EmStat2
FC4.TL.3 LEMO4	LEMO 4 pins PalmInstruments	Palmsens3, EIS, EmStat3, 3+
FC4.TL.3 LEMO5	LEMO 5 pins PalmInstruments	Palmsens4
FC4.TL.4	BNC connectors	any device
FC4.TL.5	Small banana plugs 2mm	any device
FC4.TL.6	Small banana plugs 2 mm	Electrochemical workstation any device

Analyte conversion on AC1 electrochemical sensor using FC4.TL cell at different flow rates

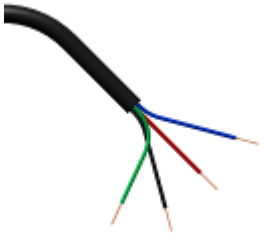


Example of Order

- 5 pieces – FC4.TL.1

Internal Wiring

FC4.TL.S

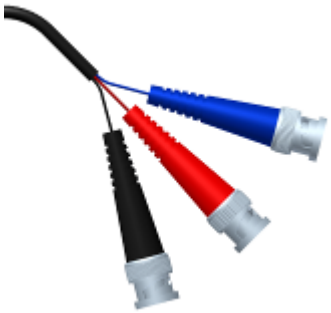


FC4.TL.1

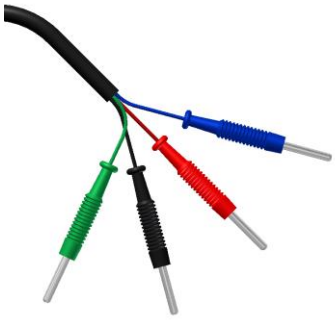
FC4.TL.2

FC4.TL.3 TRIAD
FC4.TL.3 LEMO4, FC4.TL.3 LEMO5

FC4.TL.4



FC4.TL.5



FC4.TL.6