Sampling technology

ReactIR™ sampling technology

Conduits	Usable range
K6	4000-650 cm^{-1}
K4	4000-650 cm^{-1}
K7-used with the K6 only	4000-650 cm^{-1}
FiberConduit™	
Chalcogenide (C1)*	4000-2250 cm^{-1} ,1950-1000 cm^{-1}
Silver halide (AgX)**	1900-650 cm^{-1}

*cut-off length restricted to 1.5-m
**length dependent

Sensor materials	Usable range	pH	Hardness
Diamond	4000-2250 cm^{-1}, 1950-650 cm^{-1}	1-14	Extremely robust
Silicon	4000-650 cm^{-1}	1-10*	Sensitive to abrasion, caution when cleaning
Cubic zironica	4000-1500 cm^{-1}	1-14*	Robust

* Sensor chips are available for testing sensor/chemistry compatibility

Standard 16 mm probe/Sentinel™/6 mm probe metal housing and seal

Metal = alloy C-276
Seal = gold

Part numbers	Sampling technology	Sensor material	Temperature	Pressure	Conduit	Insertion depth*
14120006 14121006 14122006	Standard 16 mm probe 36.2 cm (14.25 in) length***	Diamond Silicon Cubic zirconia	200°C	7 bar, 100 PSI	K6 only	18.4, 29.8, 36.2 cm (7.25, 11.75, 14.25 in)
14120206 14121206 14122206	High pressure 16 mm probe	Diamond Silicon Cubic zirconia	200°C	107 bar, 1500 PSI	K6 only	18.4, 29.8, 36.2 cm (7.25, 11.75, 14.25 in)
***	Non-AR coated 16 mm probe	Diamond Silicon Cubic zirconia	250°C	7 bar, 100 PSI or 107 bar, 1500 PSI	K6 only	18.4, 29.8, 36.2 cm (7.25, 11.75, 14.25 in)
14120008 *** 14120010/14150002 14106915/14151102	6 mm probe	Diamond Diamond Diamond Diamond	120°C 120°C 120°C 120°C	7 bar, 100 PSI 7 bar, 100 PSI 7 bar, 100 PSI 7 bar, 100 PSI	One piece with C1 FiberConduit™ One piece with AgX FiberConduit™ Two piece FiberConduit™ (C1) K6 with conversion kit	26.7 cm (10.5 in) up to 38.1 cm (up to 15 in) 26.7 cm (10.5 in) 26.7 cm (10.5 in)
14130009 14130109 14130203	Standard one inch diameter Sentinel™	Diamond Silicon Cubic zirconia	200°C	7 bar, 100 PSI	K4 and K7	2.86 cm (1.13 in)
14130019 14130119 14130219	High pressure Sentinel™	Diamond Silicon Cubic zirconia	200°C	107 bar, 1500 PSI	K4	2.86 cm (1.13 in)
***	Non-AR coated one inch Sentinel™**	Diamond Silicon Cubic zirconia	250°C	7 bar, 100 PSI or 107 bar, 1500 PSI	FiberConduit™ specific to Sentinel™ length	2.86 cm (1.13 in)

* Actual length is 5 cm (2 in) longer.
** Performs approximately 70% of a standard 16 mm probe or Sentinel™.
*** Contact METTLER TOLEDO for part numbers.

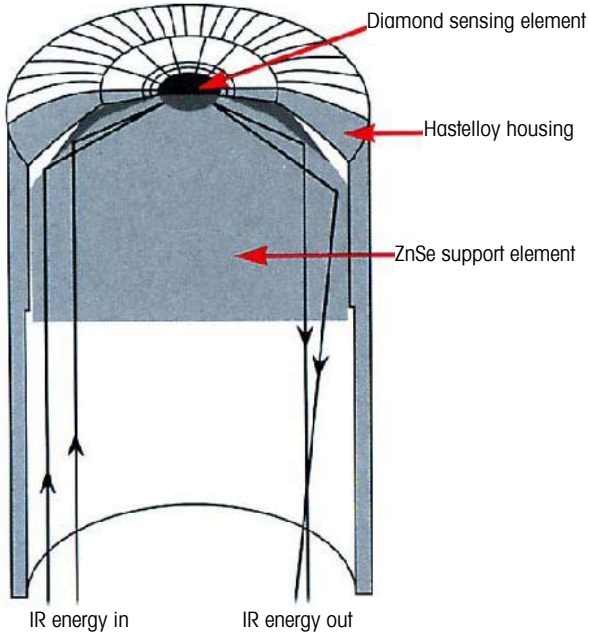
ReactIR™ sampling technology and conduit compatibility chart

	K6	K4	FiberConduit™*	K6 and K7	K6 with conversion kit
16 mm probe	X				
6 mm probe			X		X
25.4 mm probe	X				
Sentinel™		X	X	X	

* Please note that a FiberConduit™ is specific to either a 6 mm probe OR a Sentinel™, and a single FiberConduit™ cannot be used with both technologies.

METTLER TOLEDO test kits

Part number	Description
14190010	Sensor-Silicon test kit designed for testing crystal material for chemical compatability
14190014	Sensor-ZnSe test kit for testing crystal material for chemical compatability
14190016	Sensor-Gold leaf test kit designed for testing gold leaf sealing material for chemical compatability
14190018	Sensor-Alloy C-276 test kit designed for testing probe body material for chemical compatability



Schematic drawing of the Comp™ probe: infrared radiation is reflected into the chemically resistant ATR disk which is in contact with the reaction mixture.

Important information about the chemical compatibility of gold, alloy C-276, silicon, cubic zirconia, and diamond

Comp™ probes have been used for more than a decade to study thousands of chemical reactions. Despite the probe's resistance to chemical attack, there are conditions that will damage the probe. METTLER TOLEDO encourages users to test uncharted conditions using inexpensive test materials available from METTLER TOLEDO and encourages testing as an easy and inexpensive way to resolve chemical compatibility questions. For further information or with questions, please contact Customer Care or your local Technology and Applications Consultant (TAC).

www.mt.com/ReactIR

Visit for more information

Quality certificate ISO9001:2000 Real Time Analytics East Product Group
Internet: http://www.mt.com/autochem
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