MEASURING QUALITY. SINCE 1796

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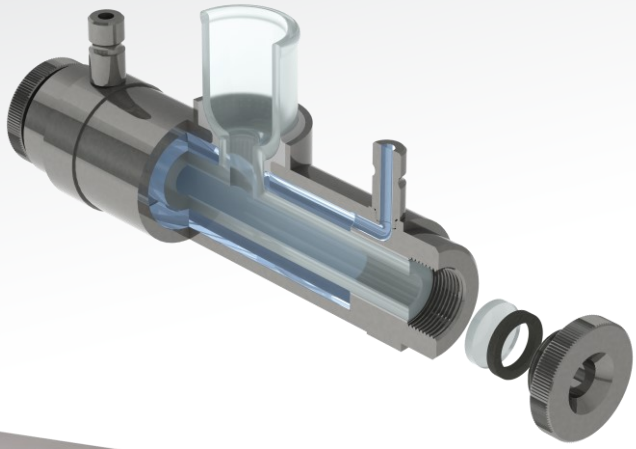
KRÜSS

POLARIMETER | MEASUREMENT TUBE

MEASUREMENT TUBES FOR A COMFORTABLE SAMPLE SUPPLY

Version 2.0 October 2022



$$[\alpha]_\lambda^t = \frac{\alpha_\lambda^t}{c \cdot l}$$

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POLARIMETER OVERVIEW

Polarimeter P8000 and P8100

Recommendable devices for all basic applications without sample temperature control. Instead of temperature control, temperature compensation according to ICUMSA can be used.

(A.KRÜSS-Website)

Polarimeter P8000-P and P8100-P

High-precision measurements through temperature control without an additional device and exact temperature control via Peltier technology.

(A.KRÜSS-Website)

Polarimeter P8000-T and P8100-T

These Polarimeter models enable in connection with temperature-controlled measurement tubes and a circulating thermostat (PT31/PT80) a sample temperature control between 8 °C up to 40 °C at PT31 and 5 °C up to 80 °C at PT80.

(A.KRÜSS-Website)

Polarimeter P3000

This device is built for standard applications as an economic solution for which a measurement accuracy of ±0.01° is sufficient and a temperature control can be omitted.

(A.KRÜSS-Website)

Polarimeter P1000-LED

Device for education and training which measures the optical rotation according to the half-shade principle. The measurement results are read through an eyepiece and two noniuses.

(A.KRÜSS-Website)

GLASS MEASUREMENT TUBE – WITHOUT TEMPERATURE CONTROL

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[2]	**P1000-LED** Without temperature control
Glass measurement tube (without temperature control) PRG-50-E und PRG-100-E und PRG-200-E						
 **Available tube lenghts:** 50/100/200 mm **Luer connection:** No **Flow-through:** No **Required sample volume[1]:** 3ml/50 mm 6 ml/100 mm 12 ml/200 mm	**Abbreviation:** **PRG**/ **P**/Polarimeter **R**/Tube **G**/Glass **E**/Filling funnel	PRG-100-E und PRG-200-E Supplied as part of the scope of delivery.	PRG-100-E und PRG-200-E Supplied as part of the scope of delivery.	PRG-100-E und PRG-200-E Supplied as part of the scope of delivery.	PRG-100-E und PRG-200-E Supplied as part of the scope of delivery.	
Glass measurement tube (without temperature control) PRG-100 und PRG-200						
 **Available tube lenghts:** 100/200 mm **Luer connections:** No **Flow-through:** No **Required sample volume[1]:** 12 ml/100 mm 22ml/200 mm	**Abbreviation:** **PRG**/ **P**/Polarimeter **R**/Tube **G**/Glass	Applicable	Applicable	Applicable	Applicable	Glass measurement tube Supplied as part of the scope of delivery

[1]Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2]Temperature control is possible on request.

MICRO MEASUREMENT TUBE – WITHOUT TEMPERATURE CONTROL

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperierung mit Peltier-Technologie	**P8000-T** **P8100-T** Temperature control Circulating thermostat/ Temperature-controlled measurement tubes recommended	**P3000** Without temperature control[2)]	**P1000-LED** Without temperature control
Glass measurement tube (without temperature control) PRG-50-M and PRG-100-M						
 **Available tube lenghts:** 50/100 mm **Luer connection:** No **Flow-through:** No **Required sample volume[1)]:** 0.55 ml/50 mm 1.1 ml/100 mm	**Abbreviation:** **PRG**/ **P**/Polarimeter **R**/Tube **G**/Glass	Applicable	Applicable	Applicable	Applicable	Applicable
Stainless steel micro flow-through measurement tube (without temperature control) PRM-10-SDM and PRM-100-SDM						
 **Available tube lenghts:** 10/100 mm **Luer connection:** Yes **Flow-through:** Yes **Required sample volume[1)]:** 0,2 ml/10 mm 0,5 ml/100 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **S**/ Tube connection **D**/ Flow-through **M**/ Micro	Only applicable with P8020	Only applicable with P8020	Only applicable with P8020	Only applicable with P8020	

[1)]Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2)]Temperature control is possible on request.

FLOW-THROUGH MEASUREMENT TUBES – WITHOUT TEMPERATURE CONTROL

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[3]	**P1000-LED** Without temperature control
Stainless steel flow-through measurement tube (without temperature control) PRM-100-SD						
 **Available tube lenghts:** 100 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1]:** 1,3 ml/100 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **S**/Tube connection **D**/Flow-through	Only applicable with P8020[2]	Only applicable with P8020[2]	Only applicable with P8020[2]	Only applicable with P8020[2]	
Stainless steel flow-through measurement tube (without temperature control) PRM-100-D and PRM-200-D						
 **Available tube lenghts:** 100/200 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1]:** 12 ml/100 mm 17 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **D**/Flow-through (with filling funnel)	Only applicable with P8020[2]	Only applicable with P8020[2]	Only applicable with P8020[2]	Only applicable with P8020[2]	

[1] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2] **P8020 = Sample chamber bushing**
It is required to organize the sample filling by a pump or to enable the temperature control (hose bushing).

[3] Temperature control is possible on request.

MEASUREMENT TUBES – TEMPERATURE-CONTROLLED (CIRCULATION THERMOSTAT PT80/PT31)

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE	**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[3]	**P1000-LED** Without temperature control
Glass measurement tube (temperature controlled) PRG-100-ET und PRG-200-ET					
 **Available tube lenghts:** 100/200 mm **Luer connection:** No **Flow-through:** No **Required sample volume**[1]**:** 4 ml/100 mm 8 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **G**/Glas **E**/ Filling funnel **T**/ temperature controlled (by surrounding water jacket)			Applicable		
Stainless steel measurement tube with filling funnel (temperature-controlled) PRM-100-ET and PRM-200-ET						
 **Available tube lenghts:** 100/200 mm **Luer connection:** No **Flow-through:** No **Required sample volume**[1]**:** 12 ml/100 mm 17 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **E**/Filling funnel **T**/temperature-controlled by surrounding water jacket)			Only applicable with P8020[2]		

[1] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2] **P8020 = Sample chamber bushing**
It is required to organize the sample filling by a pump (hose bushing) or to enable the temperature control (temperature control bushing).

[3] Temperature control is possible on request.

MEASUREMENT TUBE – TEMPERATURE-CONTROLLED (CIRCULATION THERMOSTAT PT80/PT31)

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[3]	**P1000-LED** Without temperature control
Stainless steel flow-through measurement tube (temperature-controlled) PRM-100-DTT and PRM-200-DTT						
 **Available tube lenghts:** 100/200 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1]:** 12 ml/100 mm 17 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **D**/Flow-through (with filling funnel) **T**/Temperature controlled (via water jacket) **T**/Temperature sensor			Only applicable with P8020[2]		
Temperature sensor PRT-E and PRT-T						
				Can be used with all measurement tubes (equipped with a filling funnel [4])		
PRT-E Stainless steel temperature sensor						
PRT-T Stainless steel temperature sensor, PTFE-coated						

[1] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2] **P8020 = Sample chamber bushing**
It is required to organize the sample filling by a pump (hose bushing) or to enable the temperature control (temperature control bushing).

[3] Temperature control is possible on request.

[4] If no funnel is provided, the temperature sensor is located directly in the sample chamber.

STAINLESS STEEL FLOW-THROUGH MEASUREMENT TUBE – TEMPERATURE-CONTROLLED (CIRCULATION THERMOSTAT PT80/PT31)

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE	**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[3]	**P1000-LED** Without temperature control
Stainless steel flow-through measurement tube (temperature-controlled) PRM-200-DT					
 **Available tube lenghts:** 200 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1]:** 17 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **D**/Flow-through (with filling funnel) **T**/Temperature-controlled (via water jacket)			Only applicable with P8020[2]		
Stainless steel flow-through measurement tube (temperature-controlled) PRM-200-SDT						
 **Available tube lenghts:** 200 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1]:** 17 ml/200 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **S**/Tube connection **D**/Durchfluss **T**/Temperature-controlled (via water jacket)			Only applicable with P8020[2]		

[1] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2] **P8020 = Sample chamber bushing -** It is required to organize the sample filling by a pump (hose bushing) or to enable the temperature control (temperature control bushing).

[3] Temperature control is possible on request.

MEASUREMENT TUBE – TEMPERATURE-CONTROLLED (CIRCULATION THERMOSTAT PT80/PT31)

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[3]	**P1000-LED** Without temperature control
Stainless steel flow-through measurement tube PRM-100-SDTM-2,5						
 **Available tube lenghts: 100 mm** **Luer connection:** Yes **Flow-through:** Yes **Required sample volume[1]:** 0,5 ml/100 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **S**/Tube connection **D**/Flow-through **T**/Temperature-controlled **M**/Micro			Only applicable with P8020[2]		
Stainless steel micro flow-through measurement PRM-100-SDTM-4						
 **Available tube lenghts: 100 mm** **Luer connection:** Yes **Flow-through:** Yes **Required sample volume[1]:** 1,3 ml/100 mm	**Abbreviation:** **PRM**/ **P**/Polarimeter **R**/Tube **M**/Metal **S**/Tube connection **D**/Flow-through **T**/Temperature-controlled **M**/Micro			Only applicable with P8020[2] Recommended micro measurement tube		

[1] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

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[2] **P8020 = Sample chamber bushing -** It is required to organize the sample filling by a pump (hose bushing) or to enable the temperature control (temperature control bushing).

[3] Temperature control is possible on request.

POLARIMETER MEASUREMENT TUBE – TEMPERATURE-CONTROLLED (PELTIER TEMPERATURE CONTROL)

APPLICABLE FOR POLARIMETER						
MEASUREMENT TUBE		**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[2)]	**P1000-LED** Without temperature control
Glass measurement tube (Peltier temperature control) PRG-100-EPT						
 **Available tube lenghts:** 100 mm **Luer connection:** No **Flow-through:** Yes **Required sample volume[1)]:** 8 ml/100 mm	**Abbreviation:** **PRG**/ **P**/Polarimeter **R**/Tube **G**/Glass **EPT**/Peltier temperature control (with two filling openings)	Not applicable	Recommended glass measurement tube	Not applicable	Not applicable	Not applicable

[1)] Details of the sample volume are "**approximate values**" and do not consider the filling level of the filling funnel or the respective product tolerances.

[2)] Temperature control is possible on request.

POLARIMETER QUARTZ CONTROL PLATES

APPLICABLE FOR POLARIMETER					
Quartz control plates 	**P8000** **P8100** Without temperature control	**P8000-P** **P8100-P** Temperature control with Peltier technology	**P8000-T** **P8100-T** Temperature control circulating thermostat/ temperature-controlled measurement tubes recommended	**P3000** Without temperature control[1)]	**P1000-LED** Without temperature control
Polarimeter Quartz control plate PQP models					
PQP+17 Angle of rotation: +17° (±1°), +50 °Z (±1 °Z)	Premium quartz control plate suitable for the whole product range, Accuracy: ±0.001°, With PTB-traceable factory certificate, Valid for PTB certificate, issuing of certificate on request, Wavelength: 589 nm, Temperature: 20 °C, Housing: Stainless steel				
PQP+34 Angle of rotation: +34° (±1°), +99 °Z (±1 °Z)					
PQP-17 Angle of rotation: -17° (±1°), -50 °Z (±1 °Z)					
PQP-34 Angle of rotation: -34° (±1°), -99 °Z (±1 °Z)					
Polarimeter Quartz control plate PQE models					
PQE+17 Angle of rotation: +17° (±1°), +50 °Z (±1 °Z)	Standard quartz control plate suitable for the whole product range, Accuracy: ±0.005°, With PTB-traceable factory certificate, Not valid for PTB certificate, Wavelength: 589 nm, Temperature: 20 °C, Housing: Stainless steel				
PQE+34 Angle of rotation: +34° (±1°), +99 °Z (±1 °Z)					
PQE-17 Angle of rotation: -17° (±1°), -50 °Z (±1 °Z)					
PQE-34 Angle of rotation: -34° (±1°), -99 °Z (±1 °Z)					

[1)] Temperature control is possible on request.

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