HELLMA® BESTCELLERS

QUALITY EXCEEDING EXPECTATIONS

Hellma® Analytics
High Precision in Spectro-Optics

Absorption Cells

Fluorescence Cells

Cells for Special Applications

Calibration Standards

Cleaning Solution and Other Accessories

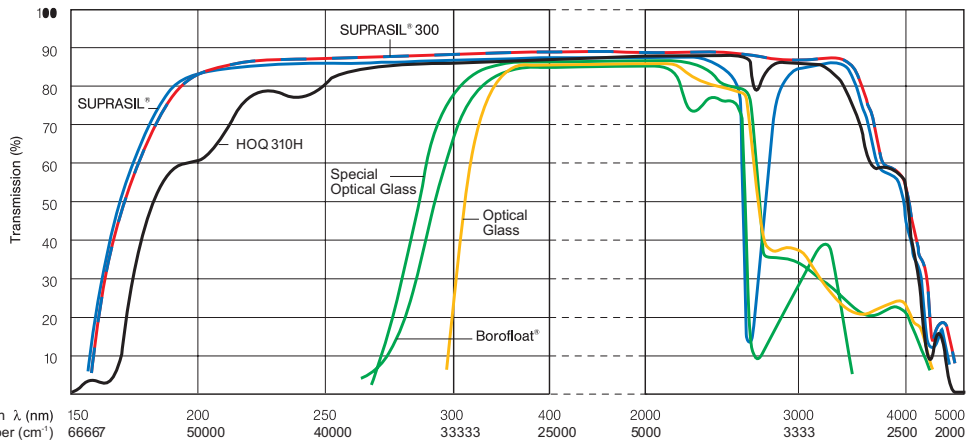
Quimigol offers a comprehensive range of high quality absorption and fluorescence cells from Hellma Analytics, ranging from the finest Suprasil® quartz cuvettes to low priced optical glass cells.

Find our complete product list for UV/VIS and fluorescence spectroscopy at

Optical Properties of Cell Window Materials

Cells from Hellma Analytics are available in different materials ranging from inexpensive optical glass to high-performance Suprasil 300 quartz. The cell selected for a specific application should exhibit high transmission in the spectral range of interest to facilitate the highest level of sensitivity in the measurement. The figure below shows the transmission spectra of these materials as obtained from empty cells. The maximum of 80–90% transmission is caused by the reflection loss at the four glass/air boundaries. When filled with common solvents, the cells will exhibit significantly higher maximum transmissions.

Material	Type (Abbreviation)	Wavelength Range [nm]
Optical glass	OG	360–2500
Borofloat®	BF	330–2500
Special optical glass	OS	320–2500
HOQ 310H	UV	260–2500
Suprasil® quartz	QS	200–2500
Suprasil® 300 quartz	QX	200–3500



Absorption Cells

PTFE Lid

PTFE Stopper

PE Stopper

Septum Screw Cap

Solid Top Screw Cap

Cat. No.	HellmaType	Material	Limit (nm) Spectral Range	Optical Pathlength (mm)	Chamber Volume (µL)
Ultra Micro, Micro and Semi Micro					
Z800015	110-QS	Suprasil quartz	200–2500	1	350
Z800120	110-QS	Suprasil quartz	200–2500	2	700
Z800244	100-QS	Suprasil quartz	200–2500	5	1750
Z627046	105.210-QS	Suprasil quartz	200–2500	10	5
Z627062	105.210-QS	Suprasil quartz	200–2500	10	5
Z600393	105.202-QS	Suprasil quartz	200–2500	10	50
Z600415	105.202-QS	Suprasil quartz	200–2500	10	50
Z600431	105.203-QS	Suprasil quartz	200–2500	10	50
Z600466	105.203-QS	Suprasil quartz	200–2500	10	50
Z600377	105.201-QS	Suprasil quartz	200–2500	10	100
Z600350	105.201-QS	Suprasil quartz	200–2500	10	100
Z600318	105.200-QS	Suprasil quartz	200–2500	10	160
Z600334	105.200-QS	Suprasil quartz	200–2500	10	160
Z600563	105B-QS	Suprasil quartz	200–2500	10	300
Z600598	105-QS	Suprasil quartz	200–2500	10	300
Z600806	115B-QS	Suprasil quartz	200–2500	10	400
Z600822	115-QS	Suprasil quartz	200–2500	10	400
Z802867	104.002-OS	optical glass	320–2500	10	700
Z600199	104.002B-QS	Suprasil quartz	200–2500	10	700
Z600210	104.002-QS	Suprasil quartz	200–2500	10	700
Z600024	6040-OG	optical glass	360–2500	10	1400
Z600075	6040-UV	Herasil quartz	260–2500	10	1400
Z600237	104B-QS	Suprasil quartz	200–2500	10	1400
Z600288	104-QS	Suprasil quartz	200–2500	10	1400
Z801216	104-OS	optical glass	320–2500	10	1400
Z801429	117.104-QS	Suprasil quartz	200–2500	10	1400
Z600733	114B-QS	Suprasil quartz	200–2500	10	1400
Z600784	114-QS	Suprasil quartz	200–2500	10	1400
Z800899	104-OS	optical glass	320–2500	50	7000
Macro					
Z802689	100-OS	optical glass	320–2500	1	350
Z803111	100-QS	Suprasil quartz	200–2500	1	350
Z801321	404.000-QX	Suprasil 300	200–3500	1	700
Z802794	100-OS	optical glass	320–2500	2	700
Z803227	100-QS	Suprasil quartz	200–2500	2	700
Z801437	404.000-QX	Suprasil 300	200–3500	2	1400
Z803332	100-QS	Suprasil quartz	200–2500	5	1750
Z802891	100-OS	optical glass	320–2500	5	1750
Z600008	6030-OG	optical glass	360–2500	10	3500
Z600695	110-QX	Suprasil 300	200–3500	10	3500
Z801313	117.100-QS	Suprasil quartz	200–2500	10	3500
Z626902	6030-UV	Herasil quartz	260–2500	10	3500
Z802751	117.200-QS	Suprasil quartz	200–2500	10	3500
Z600059	100-OS	optical glass	320–2500	10	3500
Z600091	100-QS	Suprasil quartz	200–2500	10	3500
Z600156	100-QX	Suprasil 300	200–3500	10	3500
Z600628	110-OS	optical glass	320–2500	10	3500
Z600644	110-QS	Suprasil quartz	200–2500	10	3500
Z800686	100-OS	optical glass	320–2500	20	7000

Cylindrical Absorption Cuvette (Z804657)

Cylindrical Absorption Cuvette (Z803308)

Cat. No.	Hellma Type	Material	Limit (nm) Spectral Range	Optical Pathlength (mm)	Chamber Volume (µL)
Z801003	6030-OG	optical glass	360–2500	20	7000
Z600113	100-QS	Suprasil quartz	200–2500	20	7000
Z600660	110-QS	Suprasil quartz	200–2500	20	7000
Z800783	100-OS	optical glass	320–2500	40	14000
Z800457	100-QS	Suprasil quartz	200–2500	40	14000
Z803448	110-QS	Suprasil quartz	200–2500	40	14000
Z801119	6030-OG	optical glass	360–2500	40	14000
Z600148	100-QS	Suprasil quartz	200–2500	50	17500
Z600687	110-QS	Suprasil quartz	200–2500	50	17500
Z627089	100-OS	optical glass	320–2500	50	17500
Z801542	6030-OG	optical glass	360–2500	50	17500
Z801224	402.000-OG	optical glass	360–2500	50	22500
Z800570	100-QS	Suprasil quartz	200–2500	100	35000
Z803006	100-OS	optical glass	320–2500	100	35000
Z803545	110-QS	Suprasil quartz	200–2500	100	35000
Cylindrical					
Z804320	121.000-QS	Suprasil quartz	200–2500	0.1	160
Z804444	121.000-QS	Suprasil quartz	200–2500	0.2	170
Z804541	121.000-QS	Suprasil quartz	200–2500	0.5	210
Z804657	121.000-QS	Suprasil quartz	200–2500	1	280
Z803871	120-QS	Suprasil quartz	200–2500	1	280
Z803995	120-QS	Suprasil quartz	200–2500	2	560
Z804118	120-QS	Suprasil quartz	200–2500	5	1400
Z803308	120-QS	Suprasil quartz	200–2500	10	2800
Z803405	120-QS	Suprasil quartz	200–2500	20	5600
Z803510	120-QS	Suprasil quartz	200–2500	50	14000
Z803634	120-QS	Suprasil quartz	200–2500	100	28000
For Magnetic Stirrers					
Z803774	109.004-QS	Suprasil quartz	200–2500	10	1500
Z803669	109.000-QS	Suprasil quartz	200–2500	10	3500

Screw Connectors M 6 X 1 and FEP Tubes

In/outlet Tubes

Cat. No.	Hellma Type	Material	Limit (nm) Spectral Range	Optical Pathlength (mm)	Chamber Volume (µL)	Center Height (mm)
Flow-Through						
Z801550	170.700-QS	Suprasil quartz	200–2500	0.1	6.2	all
Z801666	170.700-QS	Suprasil quartz	200–2500	0.2	12.4	all
Z801763	170.700-QS	Suprasil quartz	200–2500	0.5	31	all
Z626929	170.700-QS	Suprasil quartz	200–2500	1	62	all
Z626937	170.700-QS	Suprasil quartz	200–2500	2	124	all
Z626945	176.700-QS	Suprasil quartz	200–2500	5	195	8.5
Z626953	176.700-QS	Suprasil quartz	200–2500	5	195	15
Z802565	178.765-OS	optical glass	320–2500	10	18	8.5
Z600857	178.010-QS	Suprasil quartz	200–2500	10	80	15
Z600989	178.710-QS	Suprasil quartz	200–2500	10	80	8.5
Z601004	178-710-QS	Suprasil quartz	200–2500	10	80	15
Z600849	178.010-QS	Suprasil quartz	200–2500	10	80	8.5
Z626988	176.700-QS	Suprasil quartz	200–2500	10	390	8.5
Z626996	176.700-QS	Suprasil quartz	200–2500	10	390	15
Z804770	178.710-QS	Suprasil quartz	200–2500	50	370	15
Z804886	178.710-QS	Suprasil quartz	200–2500	50	370	8.5
Z801887	176.700-QS	Suprasil quartz	200–2500	50	1950	15
Z801992	176.700-QS	Suprasil quartz	200–2500	50	1950	8.5
Z802107	176.000-QS	Suprasil quartz	200–2500	50	2250	15
Z802212	176.000-QS	Suprasil quartz	200–2500	50	2250	8.5

Fluorescence Cells

All-Quartz Flow-Through Cell (Z802239)

Cat. No.	Hellma Type	Material	Limit (nm) Spectral Range	Optical Pathlength (mm)	Chamber Volume (µL)	Center Height (mm)
Ultra Micro, Micro and Semi Micro						
Z802336	105.251-QS	Suprasil quartz	200–2500	3×3	45	15
Z802433	105.251-QS	Suprasil quartz	200–2500	3×3	45	8.5
Z600520	105.253-QS	Suprasil quartz	200–2500	10×2	100	8.5
Z600539	105.253-QS	Suprasil quartz	200–2500	10×2	100	15
Z802549	105.250-QS	Suprasil quartz	200–2500	10×2	100	15
Z802662	105.250-QS	Suprasil quartz	200–2500	10×2	100	8.5
Z802778	115F-QS	Suprasil quartz	200–2500	10×2	400	all
Z802875	104.002F-QS	Suprasil quartz	200–2500	10×2	700	all
Z600253	104F-QS	Suprasil quartz	200–2500	10×4	1400	all
Z600768	114F-QS	Suprasil quartz	200–2500	10×4	1400	all
Macro						
Z600172	101-QS	Suprasil quartz	200–2500	10×10	3500	all
Z600717	111-QS	Suprasil quartz	200–2500	10×10	3500	all
Z803073	117.200F-QS	Suprasil quartz	200–2500	10×10	3500	all
Z803197	117.100F-QS	Suprasil quartz	200–2500	10×10	3500	all
Z802980	101-OS	optical glass	320–2500	10×10	3500	all
Z803081	111-OS	optical glass	320–2500	10×10	3500	all
Flow-Through						
Z805092	176.754-QS	Suprasil quartz	200–2500	10×2.5	275	15
Z804983	131-QS	Suprasil quartz	200–2500	10×10	3300	all
All-Quartz Flow-Through with Two Optical Pathlengths						
Z802468	176.762-QS	Suprasil quartz	200–2500	1.5 and 3	50	8.5
Z802352	176.761-QS	Suprasil quartz	200–2500	2.5 and 5	140	8.5
Z802239	176.760-QS	Suprasil quartz	200–2500	5 and 10	550	8.5

Cells for Special Applications

Cat. No.	Hellma Type	Material	Limit (nm) Spectral Range	Optical Pathlength (mm)	Chamber Volume (µL)
Large					
Z805319	700.000-OG	optical glass	360–2500	10 ± 0.2	20000
Z805637	700.016-OG	optical glass	360–2500	18 ± 0.2	10000
Z805424	700.000-OG	optical glass	360–2500	20 ± 0.2	40000
Z805521	700.010-OG	optical glass	360–2500	20 ± 0.2	56000
Z805866	704.001-OG	optical glass	360–2500	30 ± 0.2	22500
Z805750	704.003-OG	optical glass	360–2500	50 ± 0.5	88000
Demountable					
Z805963	106-QS	Suprasil quartz	200–2500	0.1 ± 0.005	26
Z800058	106-QS	Suprasil quartz	200–2500	0.5 ± 0.010	130
For Reflection Measurements					
Z800384	692.091-OG	optical glass	360–2500	—	12000
Z800481	692.103-BF	Borofloat	330–2500	—	32000
Z800600	692.104-BF	Borofloat	330–2500	—	73000
For Light Scattering					
Z803200	540.110-QS	Suprasil quartz	200–2500	—	2800
Z803316	540.111-QS	Suprasil quartz	200–2500	—	2800
Z803413	540.135-QS	Suprasil quartz	200–2500	—	14000

Calibration Standards

Hellma® Analytics calibration standards for UV/VIS spectroscopy meet internationally recognized standards and provide for highest process transparency. They ensure dependable examination of the spectral resolution, the wavelength accuracy, as well as checking for stray light and photometric accuracy. The standards are produced in a DIN EN ISO 17025 accredited calibration laboratory, are traceable to NIST and are in accordance with the most important Pharmacopoeias.

Set of Glass Filters (Z600040)

Set of Liquid Filters (Z802204)

Cat. No.	Hellma Type	Material/Content	Description	Wavelength (nm)*
Hellma Calibration Standards				
Z801658	666-F1	Holmium Oxide Glass Filter F1	For testing the wavelength accuracy	279; 361; 453; 536; 638
Z800929	666-F7W	Didymium Glass Filter F7W	For testing the wavelength accuracy	329; 472; 512; 681; 875
Z801755	666-F2	Neutral Density Glass Filter F2	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 0.25
Z801879	666-F3	Neutral Density Glass Filter F3	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 0.5
Z801984	666-F4	Neutral Density Glass Filter F4	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 1.0
Z801364	666-F7A	Neutral Density Glass Filter F7A	For testing the photometric accuracy	270; 280; 297; 320; 340, Nominal value of the absorption approx. 0.5–1.0
Z801046	666-F201	Neutral Density Glass Filter F201	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 0.3
Z801143	666-F202	Neutral Density Glass Filter F202	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 1.5
Z801259	666-F203	Neutral Density Glass Filter F203	For testing the photometric accuracy	440; 465; 546,1; 590; 635, Nominal value of the absorption 2.0
Z801461	666-F7	Didymium Glass Filter F7	For testing the wavelength accuracy and the photometric accuracy	A: 270; 280; 297; 320; 340, W: 329;472; 512; 681; 875
Z802093	666-F0	Empty Filter Mount for Calibration Standards	—	—
Hellma Calibration Standards Sets				
Z600040	666-S000	Complete Glass Filter Set: F1, F2, F3, F4, F0	For testing the wavelength accuracy and the photometric accuracy	A: 440; 465; 546,1; 590; 635 W: 279; 361; 453; 536; 638
Z801585	666-S001	Glass Filter Set: F3, F4, F7	For testing the wavelength accuracy and the photometric accuracy	A: 270; 280; 297; 320; 340; 440; 465; 546,1; 590; 635 W: 329; 472; 512; 681; 875
Z801690	666-S002	Glass Filter Set: F2, F3, F4	For testing the wavelength accuracy and the photometric accuracy	A: 440; 465; 546,1; 590; 635
Hellma Liquid Calibration Standards				
Z802328	667-UV5	UV5, Holmium oxide in perchloric acid	For testing the wavelength accuracy	241; 287; 361; 536; 640
Z802034	667-UV14	UV14, Perchloric acid [$HClO_4$], reference filter	For testing the photometric accuracy	235; 257; 313; 350
Z801801	667-UV60	UV60, 60 mg potassium dichromate in $HClO_4$ [0.75 Abs]	For testing the photometric accuracy	235; 257; 313; 350
Z801917	667-UV100	UV100, 100 mg potassium dichromate in $HClO_4$ [1.25 Abs]	For testing the photometric accuracy	235; 257; 313; 350

Liquid Filters

Glass Filters

Cat. No.	Hellma Type	Material/Content	Description	Wavelength (nm)*
Hellma® Liquid Calibration Standards Sets				
Z802131	667-UV301	UV60, UV14: UV60 (60 mg potassium dichromate in $HClO_4$ [0.75 Abs]), UV14 (Perchloric acid [$HClO_4$], reference filter)	For testing the photometric accuracy	235; 257; 313; 350
Z802654	667-UV305	UV60, UV600, UV14: UV60 (60 mg potassium dichromate in $HClO_4$ [0.75 Abs]), UV600 (600 mg potassium dichromate in $HClO_4$ [1.0 Abs]), UV14 (Perchloric acid [$HClO_4$], reference filter)	For testing the photometric accuracy	235; 257; 313; 350; 430
Z802247	667-UV307	UV20, UV40, UV60, UV80, UV100, UV14: UV20 (20 mg potassium dichromate in $HClO_4$[0.25 Abs]), UV40 (40 mg potassium dichromate in $HClO_4$[0.5 Abs]), UV60 (60 mg potassium dichromate in $HClO_4$[0.75 Abs]), UV80 (80 mg potassium dichromate in $HClO_4$[1.0 Abs]), UV100 (100 mg potassium dichromate in $HClO_4$[1.25 Abs]), UV14 (Perchloric acid [$HClO_4$], reference filter)	For testing the linearity of the absorption	235; 257; 313; 350
Z802425	667-UV100	UV1, UV12: UV1 (Potassium chloride in pure water), UV12 (Pure water [reference filter])	For testing for stray light	200 [cut-off]
Z802360	667-UV101	UV10, UV12: UV10 (Sodium iodide in pure water), UV12 (Pure water [reference filter])	For testing the stray light	259 [cut-off]
Z802476	667-UV102	UV11, UV12: UV11 (Sodium nitrite in pure water), UV12 (Pure water [reference filter])	For testing the stray light	385 [cut-off]
Z802530	667-UV200	UV6, UV9: UV6 (Toluene in n-hexane), UV9 (n-hexane [reference filter])	For testing the resolution	Scan: 265 - 270
Z802204	667-UV003	Uv1, UV12, UV6, UV9, UV60, UV600, UV14, UV5: UV1 (K chloride in pure water), UV12 (Pure water [reference filter]), UV6 (Toluene in n-hexane), UV9 (n-hexane [reference filter]), UV60 (60 mg potassium dichromate in $HClO_4$[0.75 Abs]), UV600 (600 mg potassium dichromate in $HClO_4$[1.0 Abs]), UV14 (Perchloric acid [$HClO_4$], reference filter), UV5 (Holmium oxide in perchloric acid)	For testing photometers according to Ph. Eur.	A: 235; 257; 313; 350; 430 W: 241; 287; 361; 536; 640 S: 200 [cut-off] R: Scan 265–270
Hellma® Reference Plate for Qualifying Microplate readers				
Z800716	666-R013	Neutral Density Glass Filter NG 11 [0.25], NG 5 [0.5], NG4 [1.0], NG 3 [1.5], [2.5]	To check photometric accuracy	405; 450; 490; 650
Z800813	666-R113	Neutral Density Glass Filter NG 5 [0.5], NG 4 [1.0], NG 3 [1.5], [2.0], Holmium Oxide Glass Filter	To check photometric accuracy and wavelength accuracy	405; 450; 490; 650; 279; 361; 453; 536; 638

*A: Wavelengths for absorbance, W: Wavelengths for wavelength accuracy, S: Wavelengths for stray light, R: Wavelengths for spectral resolution

Cleaning Solution and Other Accessories

Hellmanex™ III is an alkaline liquid concentrate which can simply be mixed with water to yield an effective cleaning solution for quartz and glass cells. It can also be used to clean other sensitive optical components made of glass, quartz, sapphire, and porcelain.

Cat. No.	Hellma Type	Name	Description
Z805939	320.003	Hellmanex™	Special Cleaning Concentrate for cuvettes, 1.3 kg PE bottle (1.0 L)
Z801038	325.000	SAV-a-CELL plastic cell holder	For 4 cells with 10 mm light path for cleaning purposes
Z801135	013.101	Aluminum spacer	38 mm × 12.5 mm × 9 mm, to fit cells with 1 mm light path into 10 mm cell holder
Z801240	013.102	Aluminum spacer	38 mm × 12.5 mm × 8 mm, to fit cells with 2 mm light path into 10 mm cell holder
Z801356	013.105	Aluminum spacer	38 mm × 12.5 mm × 5 mm, to fit cells with 5 mm light path into 10 mm cell holder
Z800155	040.111	FEP tubing set	500 mm long, outside ø 1.9 mm, inside ø 1.1 mm, for compact and 3-in-1 cells, with one short and one long screw fitting
Z800279	040.222	PTFE tubing set	500 mm long, with Omnifit gripper, outside ø 1.6 mm, inside ø 1.0 mm, for compact and 3-in-1 cells, with one short and one long Omnifit Gripper