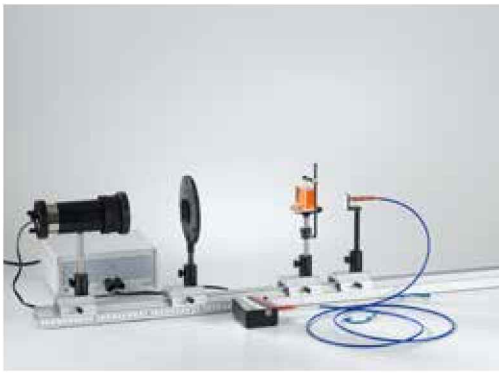

C3.3.1
SPECTROMETRY

C3.3.1.1
Absorption spectra of pigments on a screen

C3.3.1.2
Recording of absorption spectra with a spectrometer

Absorption spectra of pigments on a screen (C3.3.1.1)

Cat. No.	Description	C3.3.1.1	C3.3.1.2
460 03	Lens in frame, f=100 mm	1	1
466 05	Direct vision prism	1	
466 04	Holder for direct vision prism	1	
477 33	Cuvette made of optical glass 45 x 12,5 x 102,5 mm	1	1
460 25	Prism table	1	1
441 53	Screen, translucent	1	
450 60	Lamp housing with cable	1	1
450 521	Bulbs, 12 V/30 W, E14, set of 2	1	1
460 20	Condenser with diaphragm holder	1	1
521 210	Transformer 6/12 V	1	1
460 310	Optical bench, S1 profile, 1 m	1	1
460 311	Clamp rider with clamp 45/65	5	4
667 7977	Electronic Balance 440-3N, 200 g : 0.01 g	1	1
602 023	Beaker, Boro 3.3, 150 ml, squat	5	
665 212	Glass stirring rod 200 x 8 mm Ø	1	
665 753	Measuring cylinder 50 ml, with plastic base	1	
665 953	Dropping pipette, 7 x 150 mm, 10 pcs.	1	
665 954	Rubber bulbs, 10 pcs	1	
661 243	Wash bottle PE 500 ml	1	
671 8700	Iron(III) chloride-6-hydrate, 50 g	1	1
673 2900	Methylene blue, 1 g	1	1*
675 2550	Universal Indicator, 50 ml	1	1
309 42	Colouring, red, 10 g	1	1
675 3400	Water, pure, 1 l	1	
673 8400	Sodium hydroxide solution, diluted, aprox. 2 M, 500 ml	1	

Cat. No.	Description	C3.3.1.1	C3.3.1.2
467 251	Compact spectrometer, physics (spectral photometer)		1
460 251	Fibre holder		1
665 997	Graduated pipette 10 ml		1
666 003	Pipetting ball (Peleus ball)		1
604 5672	Double microspatula, steel, 150 mm		1
664 103	Beaker, DURAN, 250 ml, squat		1
602 043	Beaker, DURAN, 150 ml, squat		6
665 754	Measuring cylinder 100 ml, with plastic base		1
	additionally required: PC with Windows XP/Vista/7/8/10 (x86 or x64)		1

* additionally recommended

In experiment C3.3.1.1, the light from a lamp is separated out into its spectrum with a direct vision prism. That light is then projected through coloured liquids and compared with the continuous spectrum of the light from the lamp. The original continuous spectrum with the different spectral colours disappears. Only the colour components of the liquid remain visible.

In experiment C3.3.1.2, the solution of a dye is exposed to the light from a lamp. For the absorption spectrum, the light passing through the coloured solution is recorded with a spectrometer. The absorption spectrum is compared with the continuous spectrum of the light from the lamp.