4. Overwiew of the Dräger-Tubes, Chips and MicroTubes

4.1 Dräger-Tube Pumps and Systems

Dräger-Tube pump accuro with Dräger-Tube opener TO 7000	64 00 000
Dräger-Tube pump set accuro	64 00 260
Soft Gas Detection Set	83 17 186
MDG Kit	83 18 392
Dräger accuro spare parts set	64 00 220
Dräger X-act 5000 Basic	37 07 674
NiMhy Battery, T4	45 23 520
Wall-Wart Charger 100-240 Vac	45 23 545
Car Charger 12/24V	45 23 511
SO_3 Filter Replacement	81 03 525
Extension hose Dräger accuro & Dräger X-act 5000, 1 m	64 00 561
Extension hose Dräger accuro & Dräger X-act 5000, 3 m	64 00 077
Extension hose Dräger accuro & Dräger X-act 5000, 10 m	64 00 078
Extension hose Dräger accuro & Dräger X-act 5000, 15 m	64 00 079
Extension hose, 30 m for Dräger X-act 5000 and X-act 5000 Basic	64 00 175
Case, orange, without contents	83 17 147
Hot air probe	CH 00 213
Vehicle exhaust probe	CH 00 214
Probe 400	83 17 188
Dräger-Tube opener TO 7000	64 01 200
Hot pack holder, complete	83 16 130
Hot packs (2 pieces)	83 16 139
Dräger Aerotest for measurement of air, medical gases and carbon dioxide:	
Dräger Aerotest 5000	64 01 220
Dräger Aerotest Alpha, complete	65 27 150
Dräger MultiTest med. Int, complete	65 20 260
Dräger Simultaneoustest CO_2, complete	65 26 170
Dräger Aerotest Simultaneous HP, complete	65 25 951
Dräger Aerotest Navy, complete	65 25 970
Impactor for measurement of oil mist in compressed air	81 03 560
Adapter for Dräger Oil-Impactor	81 03 557
Dräger X-act 7000	86 10 800
X-am Pump	83 27 100
USB charger for X-am Pump	83 27 102
Case X-act 7000, black	37 03 690

Set 5-AA X-act 7000 T4	37 03 133
Pre Tube Holder X-act 7000	37 01 985
Dräger Tube ppb-Booster Basic	37 02 013
Coupler X-act 7000	86 10 810
Dust- and water filter	83 19 364
5 m hose FKM 3 mm, cpl. with adapters	83 25 705
10 m hose FKM 3 mm, cpl. with adapters	83 25 706
20 m hose FKM 3 mm, cpl. with adapters	83 25 707
45 m hose FKM 3 mm, cpl. with adapters	83 28 212
Telescopic probe 100, incl. accessories	83 16 530
Telescopic probe ES 150, incl. accessories	83 16 533
Rod probe 90	83 16 532
Leakage probe 70, incl. accessories	83 16 531
Hose 4,76 x 1,59 mm, 3 m, Tygon, PTFE	83 26 980
PTFE-lined tygon hose (15 m)	45 94 679
Hose connection set 3 mm	83 27 641

4.2 Dräger-Tubes for Short-Term Measurements

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]	Measurement Time [min]	Page
Acetaldehyde 100/a	67 26 665	100 to 1 000 ppm	5	108
Acetic Acid 5/a	81 03 381	40 to 800 ppm	1	109
Acetone 40/a	CH22 901	100 to 12 000 ppm	4	110
Acetone 100/b	81 03 701	0,2 to 4 ppm	4	111
		5 to 50 ppm	1	
Acid Test	81 01 121	qualitative	3 s	112
Acrylonitrile 0.2/a	81 03 701	0.2 to 4 ppm	4	113
		5 to 50 ppm	1	
Activation tube for use in conjunction with Formaldehyde 0.2/a tube	81 01 141			
Amine Test	81 01 061	qualitative	5 s	114
Ammonia 0.25/a	81 01 711	0.25 to 3 ppm	1	115
Ammonia 2/a	67 33 231	2 to 30 ppm	1	116
Ammonia 5/a	CH 20 501	5 to 70 ppm	1	117
		50 to 600 ppm	10 s	
Ammonia 5/b	81 01 941	5 to 100 ppm	10 s	118
Ammonia 0.5%/a	CH 31 901	0.5 to 10Vol%	20 s	119
Aniline 0.5/a	67 33 171	0.5 to 10 ppm	4	120
Aniline 5/a	CH 20 401	1 to 20 ppm	3	121
Arsine 0.05/a	CH 25 001	0.05 to 3 ppm	6	122
Benzene 0.25/a	81 03 691	0.25 to 2 ppm	5	123
		2 to 10 ppm	1	
Benzene 2/a (5)	81 01 231	2 to 60 ppm	8	124
Benzene 5/a	67 18 801	5 to 40 ppm	3	125
Benzene 5/b	67 28 071	5 to 50 ppm	8	126
Benzene 15/a	81 01 741	15 to 420 ppm	4	127
n-Butanol 10/a	81 03 861	10 to 250 ppm	6	128
		250 to 20000 ppm		
Carbon Dioxide 100/a	81 01 811	100 to 3000 ppm	4	129
Carbon Dioxide 0.1%/a	CH 23 501	0.5 to 6 Vol%	30 s	130
		0.1 to 1.2 Vol%	2.5	
Carbon Dioxide 0.5%/a	CH 31 401	0.5 to 10 Vol%	30 s	131
Carbon Dioxide 1%/a	CH 25 101	1 to 20 Vol%	30 s	132
Carbon Dioxide 5%/A	CH 20 301	5 to 60 Vol%	2	133

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]	Measurement Time [min]	Page
Carbon Disulfide 3/a	81 01 891	3 to 95 ppm	2	134
Carbon Disulfide 5/a	67 28 351	5 to 60 ppm	3	135
Carbon Disulfide 30/a	CH 23 201	0.1 to 10 mg/L	1	136
Carbon Monoxide 2/a	67 33 051	2 to 60 ppm	4	137
Carbon Monoxide 5/c	CH 25 601	100 to 700 ppm	30 s	138
		5 to 150 ppm	150 s	
Carbon Monoxide 8/a	CH 19 701	8 to 150 ppm	2	139
Carbon Monoxide 10/b	CH 20 601	100 to 3000 ppm	20 s	140
		10 to 300 ppm	4	
Carbon Monoxide 0.3%/b	CH 29 901	0.3 to 7 Vol%	30 s	141
Carbon Tetrachloride 0.1/a	81 03 501	0.1 to 5 ppm	2.5	142
Carbon Tetrachloride 1/a	81 01 021	1 to 15 ppm	6	143
		10 to 50 ppm	3	
Chlorine 0.2/a	CH 24 301	0.2 to 3 ppm	3	144
		3 to 30 ppm	30 s	
Chlorine 0.3/b	67 28 411	0.3 to 5 ppm	8	145
Chlorine 50/a	CH 20 701	50 to 500 ppm	20 s	146
Chlorine Dioxide 0.025/a	81 03 491	0.025 to 1 ppm	7.5	147
		0.1 to 1 ppm	2.5	
Chlorobenzene 5/a (5)	67 28 761	5 to 200 ppm	3	148
Chloroform 2/a (5)	67 28 861	2 to 10 ppm	9	149
Chloroformate 0.2/b	67 18 601	0.2 to 10 ppm	3	150
Chloromethane 10/a	81 03 911	10 to 100 ppm	4	151
Chloropicrine 0.1/a	81 03 421	0.1 to 2 ppm	7.5	152
Chloroprene 5/a	67 18 901	5 to 60 ppm	3	153
Chromic Acid 0.1/a (9)	67 28 681	0.1 to 0.5 mg/m³	8	154
Cyanide 2/a	67 28 791	2 to 15 mg/m³	2.5	155
Cyanogen Chloride 0.25/a	CH 19 801	0.25 to 5 ppm	5	156
Cyclohexane 40/a	81 03 671	40 to 200 ppm	75 s	157
		300 to 3000 ppm	15 s	
Cyclohexylamine 2/a	67 28 931	2 to 30 ppm	4	158

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]				Measurement Time [min]	Page
Diesel Fuel	81 03 475	25	to	200	mg/m³	30 s	159
Diethyl Ether 100/a	67 30 501	100	to	4000	ppm	3	160
Dimethyl Formamide 10/b	67 18 501	10	to	40	ppm	3	161
Dimethyl Sulfate 0.005/c (9)	67 18 701	0.005	to	0.05	ppm	50	162
Dimethyl Sulfide 1/a (5)	67 28 451	1	to	15	ppm	15	163
Epichlorhydrine 5/c	67 28 111	5	to	80	ppm	8	164
Ethanol 100/a	81 03 761	100	to	3000	ppm	1.5	165
Ethyl Acetate 200/a	CH 20 201	200	to	3000	ppm	5	166
Ethyl Benzene 30/a	67 28 381	30	to	400	ppm	2	167
Ethyl Glycol Acetate 50/a	67 26 801	50	to	700	ppm	3	168
Ethylene 0.1/a (5)	81 01 331	0.2	to	5	ppm	30	169
Ethylene 50/a	67 28 051	50	to	2500	ppm	6	170
Ethylene Glycol 10 (5)	81 01 351	10	to	180	mg/m³	7	171
Ethylene Oxide 1/a (5)	67 28 961	1	to	15	ppm	8	172
Ethylene Oxide 25/a	67 28 241	25	to	500	ppm	6	173
Fluorine 0.1/a	81 01 491	0.1	to	2	ppm	5	174
Formaldehyde 0.2/a	67 33 081	0.2	to	2.5	ppm	20	
		0.5	to	5	ppm	1.5	175
Activation tube for use in conjunction with Formaldehyde 0.2/a tube	81 01 141						
Formaldehyde 2/a	81 01 751	2	to	40	ppm	30 s	176
Formic Acid 1/a	67 22 701	1	to	15	ppm	3	177
Halogenated Hydrocarbons 100/a (8)	81 01 601	100	to	2600	ppm	1	178
Hexane 10/a	81 03 681	10	to	200	ppm	75 s	179
		300	to	2500	ppm	15 s	
Hydrazine 0.01/a	81 03 351	0.01	to	0.4	ppm	30	180
		0.5	to	6	ppm	1	
Hydrazine 0.25/a	CH 31 801	0.25	to	10	ppm	1	181
		0.1	to	5	ppm	2	
Hydrocarbons 2/a	81 03 581	2	to	24	mg/m³	5	182
Hydrocarbons 0.1%/c	81 03 571	0.1	to	1.3	Vol.-%	Propane	183
		0.1	to	1.3	Vol.-%	Butane	
		0.1	to	1.3	Vol.-%	mix 1:1	
Hydrochloric Acid 0.2/a	81 03 481	0.2	to	3	ppm	2	184
		3	to	20	ppm	40 s	
Hydrochloric Acid 1/a	CH 29 501	1	to	10	ppm	2	185

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]				Measurement Time [min]	Page
Hydrochloric Acid 50/a	67 28 181	500	to	5000	ppm	30 s	186
		50	to	500	ppm	4	
Hydrochloric Acid/Nitric Acid 1/a	81 01 681						187
Hydrochloric Acid		1	to	10	ppm	1.5	
Nitric Acid		1	to	15	ppm	3	
Hydrocyanic Acid 0.5/a	81 03 601	0.5	to	5	ppm	2.5	188
		5	to	50	ppm	0.5	
Hydrogen 0.2%/a	81 01 511	0.2	to	2.0	Vol%	1	189
Hydrogen 0.5%/a	CH 30 901	0.5	to	3.0	Vol%	1	190
Hydrogen Fluoride 0.5/a	81 03 251	0.5	to	15	ppm	2	191
		10	to	90	ppm	25 s	
Hydrogen Fluoride 1.5/b	CH 30 301	1.5	to	15	ppm	2	192
Hydrogen Peroxide 0.1/a	81 01 041	0.1	to	3	ppm	3	193
Hydrogen Sulfide 0.2/a	81 01 461	0.2	to	5	ppm	5	194
Hydrogen Sulfide 0.2/b	81 01 991	0.2	to	6	ppm	55 s	195
Hydrogen Sulfide 0.5/a	67 28 041	0.5	to	15	ppm	6	196
Hydrogen Sulfide 1/c	67 19 001	10	to	200	ppm	20 s	197
		1	to	20	ppm	3	
Hydrogen Sulfide 1/d	81 01 831	10	to	200	ppm	1	198
		1	to	20	ppm	10	
Hydrogen Sulfide 2/a	67 28 821	20	to	200	ppm	20 s	199
		2	to	20	ppm	3.5	
Hydrogen Sulfide 2/b	81 01 961	2	to	60	ppm	30 s	200
Hydrogen Sulfide 5/b	CH 29 801	5	to	60	ppm	4	201
Hydrogen Sulfide 100/a	CH 29 101	100	to	2000	ppm	30 s	202
Hydrogen Sulfide 0.2%/A	CH 28 101	0.2	to	7	Vol%	2	203
Hydrogen Sulfide 2%/a	81 01 211	2	to	40	Vol%	1	204
Simultaneous Tube	CH 28 201	0.2	to	7	Vol%	2	205
Hydrogen Sulfide + Sulfur Dioxide 0.2%/A							
Iodine 0.1/a	81 03 521	1	to	5	ppm	5	206
		0.1	to	0.6	ppm	4	
Mercaptan 0.1/a	81 03 281	0.1	to	2.5	ppm	3	207
		3	to	15	ppm	40 s	
Mercaptan 0.5/a	67 28 981	0.5	to	5	ppm	5 s	208
Mercaptan 20/a	81 01 871	20	to	100	ppm	2.5 s	209
Mercury Vapour 0.1/b	CH 23 101	0.05	to	2	mg/m³	10	210

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]				Measurement Time [min]	Page
Methanol 20/a	81 03 801	20	to	250	ppm	6	211
		200	to	5000	ppm	2	
Methyl Acrylate 5/a	67 28 161	5	to	200	ppm	5	212
Methyl Bromide 0,1/a	37 06 301	0.1	to	5	ppm	10	213
		5	to	50	ppm	2	
Methylene Chloride 20/a	81 03 591	20	to	200	ppm	7	214
Natural Gas Test (5)	CH 20 001	qualitative				100 s	215
Nickel Tetracarbonyl 0.1/a (9)	CH 19 501	0.1	to	1	ppm	5	216
Nitric Acid 1/a	67 28 311	5	to	50	ppm	2	217
		1	to	15	ppm	4	
Nitrogen Dioxide 0.1/a	81 03 631	5	to	30	ppm	15 s	218
		0.1	to	5	ppm	75 s	
Nitrogen Dioxide 2/c	67 19 101	5	to	100	ppm	1	219
		2	to	50	ppm	2	
Nitrous Fumes 0.2/a	81 03 661	0.2	to	6	ppm	40 s	220
Nitrous Fumes 2/a	CH 31 001	5	to	100	ppm	1	221
		2	to	50	ppm	2	
Nitrous Fumes 20/a	67 24 001	20	to	500	ppm	30 s	222
Nitrous Fumes 50/b	81 03 941	50	to	1000	ppm	120 s	223
		2000	to	4000	ppm	60 s	
Oil Mist 1/a	67 33 031	1	to	10	mg/m³	25	224
Olefine 0.05%/a	CH 31 201					5	225
Propylene		0.06	to	3.2	Vol%		
Butylene		0.04	to	2.4	Vol%		
Organic Arsenic Compounds and Arsine	CH 26 303	0.3mg/m³ as AsH_3				3	
Organic Basic Nitrogen Compounds	CH 25 903	1mg/m³ threshold value				1.5	
Oxygen 5%/B (8)	67 28 081	5	to	23	Vol%	1	226
Oxygen 5%/C	81 03 261	5	to	23	Vol%	1	227
Ozone 0.05/b	67 33 181	0.05	to	0.7	ppm	3	228
Ozone 10/a	CH 21 001	20	to	300	ppm	20 s	229
Pentane 100/a	67 24 701	100	to	1500	ppm	15 s	230
Perchloroethylene 0.1/a	81 01 551	0.5	to	4	ppm	3	231
		0.1	to	1	ppm	9	
Perchloroethylene 2/a	81 01 501	20	to	300	ppm	30 s	232
		2	to	40	ppm	3	

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]	Measurement Time [min]	Page
Perchloroethylene 10/b	CH 30 701	10 to 500 ppm	40 s	233
Petroleum Hydrocarbons 10/a	81 01 691	10 to 300 ppm	1	234
Petroleum Hydrocarbons 100/a	67 30 201	100 to 2500 ppm	30 s	235
Phenol 1/b	81 01 641	1 to 20 ppm	5	236
Phosgene 0.02/a	81 01 521	0.02 to 1 ppm	6	237
		0.02 to 0.6 ppm	12	
Phosgene 0.05/a	CH 19 401	0.04 to 1.5 ppm	11	238
Phosgene 0.25/c	CH 28 301	0.25 to 5 ppm	1	239
Phosphine 0.01/a	81 01 611	0.01 to 0.3 ppm	8	240
		0.1 to 1.0 ppm	2.5	
Phosphine 0.1/c	81 03 711	0.5 to 3 ppm	1	241
		0.1 to 1.0 ppm	2.5	
Phosphine 0.1/b	81 03 341	1 to 15 ppm	20 s	242
in Acetylene		0.1 to 1 ppm	4	
Phosphine 1/a	81 01 801	10 to 100 ppm	2	243
		1 to 20 ppm	10	
Phosphine 25/a	81 01 621	200 to 10000 ppm	1.5	244
		25 to 900 ppm	13	
Phosphine 50/a	CH 21 201	50 to 1000 ppm	2	245
Phosphoric Acid Esters 0.05/a	67 28 461	0.05 ppm Dichlorvos	5	245
Polytest	CH 28 401	qualitative	1.5	246
i-Propanol 50/a	81 03 741	50 to 4000 ppm	2.5 min	247
Pyridine 5/A	67 28 651	5 ppm	20	248
Styrene 10/a	67 23 301	10 to 200 ppm	3	249
Styrene 10/b	67 33 141	10 to 250 ppm	3	250
Styrene 50/a	CH 27 601	50 to 400 ppm	2	251
Sulfuryl Fluoride 1/a (5)	81 03 471	1 to 5 ppm	3	252
Sulfur Dioxide 0.1/a	67 27 101	0.1 to 3 ppm	20	253
Sulfur Dioxide 0.5/a	67 28 491	1 to 25 ppm	3	254
		0.5 to 5 ppm	6	
Sulfur Dioxide 1/a	CH 31 701	1 to 25 ppm	3	255
Sulfur Dioxide 20/a	CH 24 201	20 to 200 ppm	3	256
Sulfur Dioxide 50/b	81 01 531	400 to 8000 ppm	15 s	257
		50 to 500 ppm	3	
Sulfuric Acid 1/a (9)	67 28 781	1 to 5 mg/m^3	100	258

Dräger-Tubes	Order Code	Standard Range of Measurement [20 °C, 1013 hPa]				Measurement Time [min]	Page
Tertiary Butylmercaptan (natural gas odorization)	81 03 071	1	to	10	mg/m³	5	259
Tetrahydrothiophene 1/b (5)	81 01 341	1	to	10	ppm	10	260
		4	to	40	mg/m³		
Thioether	CH 25 803	1 mg/m³ threshold value				1.5	261
Toluene 5/b	81 01 661	50	to	300	ppm	2	262
		5	to	80	ppm	10	
Toluene 50/a	81 01 701	50	to	400	ppm	1.5	263
Toluene 100/a	81 01 731	100	to	1800	ppm	1.5	264
Toluene Diisocyanate 0.02/A (9)	67 24 501	0.02	to	0.2	ppm	20	265
Trichloroethane 50/d (5)	CH 21 101	50	to	600	ppm	2	266
Trichloroethylene 2/a	67 28 541	20	to	250	ppm	1.5	267
		2	to	50	ppm	2.5	
Trichloroethylene 50/a	81 01 881	50	to	500	ppm	1.5	268
Triethylamine 5/a	67 18 401	5	to	60	ppm	2	269
Vinyl Chloride 0.5/b	81 01 721	5	to	30	ppm	30 s	270
		0.5	to	5	ppm	3	
Vinyl Chloride 100/a	CH 19 601	100	to	3000	ppm	4	271
Water Vapor 0.1	CH 23 401	1	to	40	mg/L	2	272
Water Vapor 0.1/a	81 01 321	0.1	to	1.0	mg/L	1.5	273
Water Vapor 1/b	81 01 781	20	to	40	mg/L	40 s	274
		1	to	18	mg/L	40 s	
Water Vapor 3/a	81 03 031	3.0	to	60	lbs/mmcf	90 s	275
Xylene 10/a	67 33 161	10	to	400	ppm	1	276