

## Reagents also suitable for use in Hach VARIO Powder Packs (PP) and Reagents for Photometry

Test	Range	Reagent	Liquid Reagent	Tube Tests	Powder Pack
<b>Aluminium</b>	0 – 0.22 mg/l Al	VARIO Aluminium Reagent, set F20 consists of: VARIO Aluminium ECR VARIO Aluminium Hexamine VARIO Aluminium Masking Rgt	■		■ ■
<b>Ammonia</b>	0 – 0.5 mg/l N	VARIO Ammonia Nitrogen, set F10 consists of: VARIO Ammonia Salicylate, F10 VARIO Ammonia Cyanurate, F10			■ ■
<b>Ammonia LR</b>	0 – 2.5 mg/l N	VARIO Am tube test Reagent, set LR, F5 consists of: VARIO Ammonia Salicylate, F5 VARIO Ammonia Cyanurate, F5 VARIO Am Diluent Reagent Low Range		■	■ ■
<b>Ammonia HR</b>	0 – 50 mg/l N	VARIO Am tube test Reagent, set HR, F5 consists of: VARIO Ammonia Salicylate, F5 VARIO Ammonia Cyanurate, F5 VARIO Am Diluent Reagent High Range		■	■ ■
<b>Ammonia, free</b>	0.04 - 4.5 mg/l Cl <sub>2</sub>	VARIO FREE AMMONIA REAGENT SET consists of: VARIO Free Ammonia Reagent Solution VARIO Monochlor F RGT	■		■
<b>Chlorine</b> free, combined and total <b>Chlorine dioxide</b>	Visual Test Kit up to 3.5mg/l Cl <sub>2</sub>	VARIO Chlorine FREE-DPD, F5 VARIO Chlorine FREE-DPD, F5 VARIO Chlorine TOTAL-DPD, F5 VARIO Chlorine TOTAL-DPD, F5			■ ■ ■ ■
	0.01 – 2 mg/l Cl <sub>2</sub>	VARIO Chlorine FREE-DPD, F10 VARIO Chlorine FREE-DPD, F10 VARIO Chlorine TOTAL-DPD, F10 VARIO Chlorine TOTAL-DPD, F10			■ ■ ■ ■
	0 – 5 mg/l Cl <sub>2</sub>	VARIO Chlorine FREE-DPD, F25 VARIO Chlorine FREE-DPD, F25 VARIO Chlorine TOTAL-DPD, F25 VARIO Chlorine TOTAL-DPD, F25			■ ■ ■ ■
<b>COD LR</b>	0 – 150 mg/l O <sub>2</sub>	COD VARIO 0 - 150 mg/l		■ ■ ■	
<b>COD MR</b>	0 – 1500 mg/l O <sub>2</sub>	COD VARIO 0 - 1500 mg/l		■ ■ ■ ■	
<b>COD HR</b>	0 – 15000 mg/l O <sub>2</sub>	COD VARIO 0 - 15000 mg/l		■ ■ ■	
<b>Copper</b>	0 – 5 mg/l Cu	VARIO CU1, F10 VARIO CU1, F10			■ ■
<b>DEHA</b>	20 - 500 µg/l DEHA	VARIO DEHA REAGENT SET consists of: VARIO OXYSCAV 1 RGT VARIO DEHA 2 RGT	■		■

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Method	Applications	Quantity	Code
		<b>1 set</b>	53 50 00
Eriochrome cyanine R	Water	100 100 25 ml	
		<b>1 set</b>	53 55 00
Salicylate	Water, waste water, seawater	2 x 100 2 x 100	
		<b>1 set</b>	53 56 00
Salicylate	Water, waste water, seawater	50 50 50 vials	
		<b>1 set</b>	53 56 50
Salicylate	Water, waste water, seawater	50 50 50 vials	
		<b>1 set</b>	53 58 00
Indophenol	Water	5 ml 100	53 18 10
DPD Method: <b>USEPA</b> accepted for drinking water analysis	Water, waste water, seawater	100 1000 100 1000	53 00 90 53 00 93 53 00 80 53 00 83
DPD Method: <b>USEPA</b> accepted for drinking water analysis	Water, waste water, seawater	100 1000 100 1000	53 01 00 53 01 03 53 01 20 53 01 23
DPD Method: <b>USEPA</b> accepted for drinking water analysis	Water, waste water, seawater	100 1000 100 1000	53 01 10 53 01 13 53 01 30 53 01 33
Dichromate Reactor, Digestion	Water, waste water, seawater	25 vials 150 vials 25 vials, mercury free	2 42 07 20 2 42 07 25 2 42 07 10
Dichromate Reactor, Digestion	Water, waste water, seawater	25 vials 150 vials 25 vials, mercury free 150 vials, mercury free	2 42 07 21 2 42 07 26 2 42 07 11 2 42 07 16
Dichromate Reactor, Digestion	Water, waste water, seawater	25 vials 150 vials 25 vials, mercury free	2 42 07 22 2 42 07 27 2 42 07 12
Bicinchoninate	Water, waste water, seawater	100 1000	53 03 00 53 03 03
		<b>1 set</b>	53 60 00
PPST		100 100 ml	

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Hydrazine	0.005 – 0.6 mg/l N <sub>2</sub> H <sub>4</sub>	VARIO Hydra2 Reagent	■		
Iron (Fe <sup>2+</sup> , Fe <sup>3+</sup> ), dissolved	0 – 3 mg/l Fe	VARIO Ferro, F10			■
	0 – 1.8 mg/l Fe	VARIO IRON TPTZ			■
Manganese LR	0 – 0.7 mg/l Mn	VARIO Manganese Reagent, set LR, F10 consists of: VARIO Alkaline-Cyanide Reagent Solution VARIO Ascorbic Acid VARIO PAN Indicator Solution	■ ■		■
		VARIO Manganese Reagent, set HR, F10 consists of: VARIO MANGANESE CITRATE BUFFER, F10 VARIO SODIUMPERIODATE, F10			■ ■
Molybdate HR	0 – 35 mg/l Mo	VARIO MOLYBDENUM HR, set F10 consists of: VARIO MOLYBDENUM HR1, F10 VARIO MOLYBDENUM HR2, F10 VARIO MOLYBDENUM HR3, F10			■ ■ ■
	0 – 35 mg/l Mo	VARIO MOLYBDENUM HR, set F25 consists of: VARIO MOLYBDENUM HR1, F25 VARIO MOLYBDENUM HR2, F25 VARIO MOLYBDENUM HR3, F25			■ ■ ■
Monochloramine	0.04 - 4.5 mg/l Cl <sub>2</sub>	VARIO FREE AMMONIA REAGENT SET consists of: VARIO Free Ammonia Reagent Solution VARIO Monochlor F RGT	■		■
Nitrate	0 – 30 mg/l N	VARIO NITRA X Reagent, set consists of: VARIO NITRA X Test vials VARIO NITRA NITROGEN NITRATE Reag. B Deionised water		■	■
Nitrogen, total LR	0 – 25 mg/l N	VARIO TOTAL NITROGEN LR, set consists of <b>a)</b> and <b>b)</b> : <b>a)</b> VARIO TOTAL NITROGEN HYDROX. LR, set VARIO TOTAL NITROGEN HYDROX. LR, vials VARIO TOTAL N PERSULFATE Reagent <b>b)</b> VARIO TOTAL NITROGEN ACID LR/HR, set VARIO TOTAL NITROGEN Reag. A VARIO TOTAL NITROGEN Reag. B VARIO TOTAL NITROGEN ACID LR/HR vials Deionised water		■	■ ■ ■
		VARIO TOTAL NITROGEN HR, set consists of <b>a)</b> and <b>b)</b> : <b>a)</b> VARIO TOTAL NITROGEN HYDROX. HR, set VARIO TOTAL NITROGEN HYDROX. HR, vials VARIO TOTAL N PERSULFATE Reagent <b>b)</b> VARIO TOTAL NITROGEN ACID LR/HR, set VARIO TOTAL NITROGEN Reag. A VARIO TOTAL NITROGEN Reag. B VARIO TOTAL NITROGEN ACID LR/HR vials Deionised water	■	■	■ ■ ■

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Method	Applications	Quantity	Code
4-(Dimethylamino)-benzaldehyde	Water, waste water, seawater	100 ml	53 12 00
Iron, total: 1, 10-phenantroline	Water, waste water, seawater	100	53 05 60
Iron, total: TPTZ	Water, waste water, seawater	100	53 05 50
		<b>1 set</b>	53 50 90
PAN	Water, waste water	50 ml 100 50 ml	
		<b>1 set</b>	53 51 00
Periodate oxidation	Water, waste water	100 100	
		<b>1 set</b>	53 53 00
Mercaptoacetic acid	Water, waste water	100 100 100	
		<b>1 set</b>	53 54 00
Mercaptoacetic acid	Water, waste water	100 100 100	
		<b>1 set</b>	53 58 00
Indophenol	Water	5 ml 100	53 18 10
		<b>1 set</b>	53 55 80
Chromotropic acid	Water, waste water	50 50 100 ml	
		<b>1 set</b>	53 55 50
Persulfate digestion	Water, waste water	50 50 50 50 100 ml	
		<b>1 set</b>	53 55 60
Persulfate digestion	Water, waste water	50 50 50 50 100 ml	

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Nitrite LR	0 – 0.3 mg/l N	VARIO NITRI3, F10 VARIO NITRI3, F25			■ ■
Phosphate, reactive	0 – 2.5 mg/l PO <sub>4</sub>	VARIO PHOS3, F10			■
Phosphate, ortho	0.06 - 5 mg/l PO <sub>4</sub>	VARIO REACTIVE PHOSPHATE REAGENT SET consists of: VARIO PHOSPHATE DILUTION TUBE TEST VARIO PHOS3, F10 Deionised water	■	■	■
Phosphate, Acid hydrolyzable and total	acid hydrolyzable: 0.02 - 1.6 mg/l P Δ 0.06 - 5 mg/l PO <sub>4</sub> total: 0.02 - 1.1 mg/l P Δ 0.06 - 3.5 mg/l PO <sub>4</sub>	VARIO TOTAL & ACID HYDROLYZABLE PHOSPHATE REAGENT SET consists of: VARIO PHOSPHATE ACID REAG. TUBE TEST Deionised water VARIO PHOS3, F10 VARIO SODIUM HYDROXID 1N VARIO SODIUM HYDROXID 1,54N VARIO POTASSIUM PERSULFATE	■ ■ ■	■	■ ■
Phosphate, total	0.02 - 1.1 mg/l P Δ 0.06 - 3.5 mg/l PO <sub>4</sub>	VARIO TOTAL PHOSPHATE REAGENT SET consists of: VARIO PHOSPHATE ACID REAG. TUBE TEST VARIO PHOS3, F10 Deionised water VARIO SODIUM HYDROXID 1,54N VARIO POTASSIUM PERSULFATE	■ ■	■	■ ■
Phosponate	0.02 - 125 mg/l PO <sub>4</sub>	VARIO PHOSPHONATE REAGENT SET consists of: VARIO Potassium Persulfate F10 VARIO PHOS3, F10			■ ■
Silica, LR	0 – 1.6 mg/l SiO <sub>2</sub>	VARIO SILICA Reagent LR, set F10 consists of: VARIO LR SILICA AMINO ACID F VARIO SILICA CITRIC ACID VARIO MOLYBDATE 3 Reagent Solution	■		■ ■
Silica, HR	0 – 100 mg/l SiO <sub>2</sub>	VARIO SILICA Reagent HR, set F10 consists of: VARIO SILICA HR MOLYBDATE, F10 VARIO SILICA HR ACID RGT, F10 VARIO SILICA CITRIC ACID, F10			■ ■ ■
Silica, UHR	0 – 200 mg/l SiO <sub>2</sub>	VARIO SILICA Reagent HR, set F25 consists of: VARIO SILICA HR MOLYBDATE, F25 VARIO SILICA HR ACID RGT, F25 VARIO SILICA HR CITRIC ACID, F25			■ ■ ■
Sulphate	0 – 70 mg/l SO <sub>4</sub>	VARIO Sulpha 4, F10 VARIO Sulpha 4, F25			■ ■

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Method	Applications	Quantity	Code
Diazotization	Water, waste water	100	53 09 80
		100	53 09 70
Phosphomolybdate Ascorbic acid	Water, waste water, sea water	100	53 15 50
		<b>1 set</b>	53 52 00
Phosphomolybdate Ascorbic acid	Water, waste water	50	53 52 50
		50 100 ml	
Phosphomolybdate Ascorbic acid	Water, waste water	50	53 52 10
		50 100 ml 100 ml 100 ml 50	
Phosphomolybdate Ascorbic acid	Water, waste water	50	53 52 00
		50 100 ml 100 ml 50	
Persulfate UV-Oxidation	Water	100	53 56 90
		200	
Heteropoly blue	Water, sea water	100	53 57 00
		100 50 ml	
Silicomolybdate	Water, sea water	100	53 59 00
		100 100	
Silicomolybdate	Water, sea water	100	53 21 60
		100 100	
<b>USEPA</b> accepted for waste water analysis	Water, waste water, sea water	100	53 21 50
		100	



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