## B001772 Spectrometer and Accessories

		B001772		Vernier Software & Technology		Ward's Natural Science		Fisher Scientific Company	
item	ea		-						
1	10	Spectrometer	<mark>\$1,163.0</mark>		\$1,199.0		\$1,262.3		
		Vernier Model #V-SPEC	_	<mark>\$11,630.30</mark>		\$11,990.00		\$12,623.10	
		Powered by Ocean Optics™ technology	_						
		Portable device measures 10cm x 9cm x 3cm	_						
		One-step calibration of the full spectrum	_						
		Complete visible light spectrum, 380 – 950 nm, collected in a fraction	_						
		<ul> <li>of a second</li> <li>Open cuvette holder allows for access to the sample during testing</li> </ul>	_						
		Other Vernier sensors can be used simultaneously	-						
		<ul> <li>Other vernier sensors can be used simulateously</li> <li>Draws its power from computer, eliminating the need for additional power source</li> </ul>	-						
		Requires Logger Pro 3.5 software or newer	-						
2	6	Labquest Quick-Start Package	\$343.00		\$358.00		\$358.00		
2	0	Vernier Model #LQ-QSP	_ <del>ψ040.00</del>	\$2,058.00		\$2,148.00	φ550.00	\$2,148.00	
		Includes Logger Lite software, #LABQ	_						
		Includes stainless steel temperature probe, #TMP-BTA	_						
3	10	Optical Fiber	\$121.25		\$125.00		\$125.00		
		Vernier Model #VIS-NIR		\$1,212.50		\$1,250.00		\$1,250.00	
		• 400 μm diameter	_						
		Used with V-SPEC spectrometer	_						
4	6	pH Sensor	\$76.63		\$79.00		\$125.00		
		Vernier Model #PH-BTA	-	\$459.78		\$474.00		\$750.00	
		Type: Sealed, gel-filled, epoxy body, Ag/AgCl	_						
		Response time: 90% of final reading in 1 second							
		Temperature range: 5 to 80°C							
		• 12 mm OD							
		Range: pH 0-14							
		13-bit Resolution (SensorDAQ): 0.0025 pH units							
		12-bit Resolution (LabQuest, Go!Link, LabPro, ULI, SBI): 0.005 pH units	_						
		10-bit Resolution (CBL2): 0.02 pH units	_						
		Isopotential pH: pH 7 (point at which temp has no effect on output)	_						
		<ul> <li>Output: 59.2 mV/pH at 25°C</li> <li>Stored Calibration Values<sup>2</sup>: Intercept (k<sub>i</sub>) = 13.720, Slope (k<sub>i</sub>) = -3.838</li> </ul>	-						
		• Stored Calibration Values: Intercept $(k_s) = 15.720$ , Stope $(k_s) = -5.656$	-						
5	6	Gas Pressure Sensor	<mark>\$78.57</mark>		\$81.00		\$145.00		
		Vernier Model #GPS-BTA	_	\$471.42		\$486.00		\$870.00	
		Pressure Range: 0 to 210 kPa (0 to 2.1 atm or 0 to 1600 mm Hg)	_						
		Maximum pressure that the sensor can tolerate w/out permanent	_				-		
		damage is 4 atm	_						
		<ul> <li>13-bit Resolution (SensorDAQ): 0.025 kPa (0.00025 atm or 0.20 mm Hg)</li> <li>12-bit Resolution (LabQuest, LabPro, Go!Link): 0.05 kPa (0.0005 atm or 0.40</li> </ul>	-						
		mm Hg)							
		• 10-bit Resolution (CBL2): 0.2 kPa (0.002 atm or 1.6 mm Hg)	_						
		Sensing element: SenSym SDX30A4							
		Combined linearity and hysteresis: typical ±0.2% full scale	_						
		Response time: 100 microseconds	_						
		Stored Calibration Values for the Gas Pressure Sensor <sup>2</sup> :	_						
		kPa, slope = 46.48; intercept = 0	_						
		atm, slope = 0.4587; intercept = 0 mm Hg = slope = 348.63; intercept = 0	-						
6	6	Colorimeter  Vernier Model #COL-BTA	_ <mark>\$110.58</mark>	\$660 A0	\$114.00	\$684.00	\$202.50	¢1 015 0	
		Vernier Model #COL-BTA     Colorimer range: 0 to 3 (absorbance)	-	\$663.48		<b>ФО04.UU</b>		\$1,215.00	
		Colorimer range: 0 to 3 (absorbance)     Useful range: 0.05 to 1.0 absorbance (90% to 10% T)	-						
		Wavelengths: 430nm, 470nm, 565nm, 635nm	-						
		Vavelengths: 430mm, 470mm, 505mm, 635mm     13-bit Resolution (SensorDAQ): 0.018%T	-						
		12-bit Resolution (JabQuest, LabPro, ULI II, SBI): 0.035%T							
		10-bit Resolution (CBL2): 0.14%T	-						
		Supply Voltage: 5VDC ±25 mV	-						
		Supply Current (typical): 40 mA							
		Power up time: 700ms (maximum)							
		Output voltage range: 0-4 V							
		<ul> <li>Transfer function: V out = 0.035-(%T) + 0</li> </ul>							

7	6	Temperature Probe	\$28.13	\$29.00	\$49.95
1	0	Vernier Model #TMP-BTA	\$168.78		\$299.70
		Stainless steel	φ100.70	φΠ+.00	φ200.1 (
		Temperature range: -40 to 135°C (-40 to 275°F)			
		Maximum temperature that the sensor can tolerate			
		without damage: 150°C			
		13-bit resolution (LabQuest):			
		0.09°C (-40 to 0°C)			
		0.02°C (0 to 40°C)			
		0.05°C (40 to 100°C)			
		0.13°C (100 to 135°C)			
		12-bit resolution (LabQuest, LabPro):			
		0.17°C (-40 to 0°C)			
		0.03°C (0 to 40°C)			
		0.1°C (40 to 100°C)			
		0.25°C (100 to 135°C)			
		10-bit resolution (CBL2):	-		
		• 10-bit resolution (CBL2). 0.68°C (-40 to 0°C)	-		
		0.12°C (0 to 40°C)			
		0.12 C (0 to 40 C) 0.4°C (40 to 100°C)			
		1.0°C (100 to 135°C)			
		Temperature sensor: 20k NTC Thermistor			
		<ul> <li>Accuracy: ±0.2°C at 0°C, ±0.5°C at 100°C</li> </ul>			
		Response time (time for 90% change in reading):			
		10 seconds (in water, with stirring)			
		400 seconds (in still air)			
		90 seconds (in moving air)	-		
		Probe dimensions:	-		
		Probe length (handle plus body): 15.5 cm	-		
		Stainless steel body: length 10.5 cm, diameter 4.0 mm	-		
		Probe handle: length 5.0 cm, diameter 1.25 cm			
		Tobe handle. length 5.0 cm, diameter 1.25 cm	\$16.664.26	\$17.206.00	\$19,155.80
		Total	\$10,004.20	\$17,200.00	\$19,155.00
		Business classification			
		FOB			
			7-10 bus.days ARC	15-30 days ARO	14 days AR0
		Terms			N3
		Reference number			8176-4387-7
		Warranty			1 v
		Quotation effective until			8/22/2008
		IncluicA line and Arilant Technologies, Include the MODID			
		Jeol USA, Inc and Agilent Technologies, Inc submitted a NO BID			
		BID AWARDED TO VERNIER SOFTWARE TECHNOLOGY, INC AS THE LOWEST BID		1	

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