

**EVALUATION REPORT ON TECHNICAL BIDS OPENED ON 08-10-2016 FOR THE PROCUREMENT OF D.O METER, TENDER
ENQUIRY NO. PC/DF (EXT)-III/(2016-17)**

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendations with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				Model: Starter 300 D Country of Origin: Ohaus- USA			
1	Measurement Range	%	0.0 to 199.9%; 200 to 400% or better	Saad Scientific Supplier Suite #13 Ground Floor, Wajid Centre Muj Darya Road, Lahore	Measurement Range	%	0.0 to 199.9%; 200 to 400%	This firm has quoted specifications of D.O meter which match the approved specifications of the Department for D.O meter. Thus, this firm is RECOMMENDED for purchase of said item.
		Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L or better			Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L	
		PPm	0.00 to 19.99; 20.0 to 45.0ppm or better			PPm	0.00 to 19.99; 20.0 to 45.0ppm	
		Temp %	0 to 50 C° 0.1%; 1% or better			Temp %	0 to 50 C° 0.1%; 1%	
	Measurement Resolution	mg/L	0.01 mg/L; 0.1mg/L or better		Measurement Resolution	mg/L	0.01 mg/L; 0.1mg/L	
		ppm	0.01ppm; 0.1 ppm or better			ppm	0.01ppm; 0.1 ppm	
		Temp mmHg	0.1 C° 375 to 825mmHg or better			Temp mmHg	0.1 C° 375 to 825mmHg	
	Barometric range	mbar	500 to 1100 mbar or better		Barometric range	mbar	500 to 1100 mbar	
hPa		500 to 1100 hPa or better	hPa	500 to 1100 hPa				
mmHg		1 mmHg	mmHg	1 mmHg				
Barometric resolution	mbar	1 mbar	Barometric resolution	mbar	1 mbar			
	hPa	1 hPa		hPa	1 hPa			
Accuracy		+1%; +0.3 C°	Accuracy		+1%; +0.3 C°			
Salinity Compensation		0.0to 50.0 ppt or better	Salinity Compensation		1.0to 50.0 ppt			

Calibration		1 or 2 points		Calibration		1 or 2 points	
Memory		30 Sets, last calibration data		Memory		30 Sets, last calibration data	
Power		4 X AAA, 250 hrs		Power		4 X AAA, 250 hrs	
Display IP rating		Liquid crystal IP54 or better		Display IP rating		Liquid crystal IP54	
Input Materials		BNC; Cinch (NTC 30 k Ω) ABS		Input Materials		BNC; Cinch (NTC 30 k Ω) ABS	

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				A. Model: YSI Eco Sense DO200 A Country of Origin: USA			
2 (A)	Measurement Range	% Mg/L PPm Temp %	0.0 to 199.9%; 200 to 400% or better 0.00 to 19.99; 20.0 to 45.0 mg/L or better 0.00 to 19.99; 20.0 to 45.0ppm or better 0 to 50 C° 0.1%; 1% or better	East West Infiniti pvt Ltd. 146, industrial triangle, kahauta road, humak Islamabad	Measurement Range	% Mg/L PPm Temp %	0 to 200% 0 to 20ppm Not mentioned -6 to 46 C° Not mentioned	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has quoted the specifications which not match the specifications mentioned in the tender. i. Measurement resolution ii. Barometric range iii. Barometric resolution iv. Display IP rating v. Input material
	Measurement Resolution	mg/L ppm Temp mmHg	0.01 mg/L; 0.1mg/L or better 0.01ppm; 0.1 ppm or better 0.1 C° 375 to 825mmHg or better		Measurement Resolution	mg/L ppm Temp mmHg	Not mentioned 0.01 ppm Not mentioned Not mentioned	

Barometric range	mbar	500 to 1100 mbar or better	Barometric range	mbar	Not mentioned
	hPa	500 to 1100 hPa or better		hPa	Not mentioned
	mmHg	1 mmHg		mmHg	Not mentioned
Barometric resolution	mbar hPa	1 mbar 1 hPa	Barometric resolution	mbar hPa	Not mentioned Not mentioned
Accuracy		$\pm 1\%$; $\pm 0.3\text{ C}^\circ$	Accuracy		Not mentioned
Salinity Compensation		2.0 to 50.0 ppt or better	Salinity Compensation		0.0 to 40.0 ppt (manual input during calibration)
Calibration		1 or 2 points	Calibration		Yes
Memory		30 Sets, last calibration data	Memory		50 data Sets, review able memory
Power		4 X AAA, 250 hrs	Power		One 9 volt included with purchase, 500 hrs battery life
Display IP rating		Liquid crystal IP54 or better	Display IP rating		Not mentioned
Input Materials		BNC; Cinch (NTC 30 k Ω) ABS	Input Materials		Not mentioned

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				B. Model: YSI PRO 20 Country of Origin: USA			
2 (B)	Measurement Range	%	0.0 to 199.9%; 200 to 400% or better	East West Infiniti pvt Ltd. 146, industrial triangle, kahauta road, humak Islamabad	Measurement Range	%	0.0 to 500%	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has quoted the specifications which not match the specifications mentioned in the tender. i. Measurement resolution ii. Barometric range iii. Barometric resolution iv. Display IP rating v. Input material vi. Calibration
		Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L or better			Mg/L	0 to 50 mg/L	
		PPm	0.00 to 19.99; 20.0 to 45.0ppm or better			PPm	Not mentioned	
		Temp %	0 to 50 C° 0.1%; 1% or better			Temp %	-5 to 55 C° Not mentioned	
	Measurement Resolution	mg/L	0.01 mg/L; 0.1mg/L or better		Measurement Resolution	mg/L	0.01 or 0.1mg/L;	
		ppm	0.01ppm; 0.1 ppm or better			ppm	Not mentioned	
		Temp mmHg	0.1 C° 375 to 825mmHg or better			Temp mmHg	Not mentioned Not mentioned	
	Barometric range	mbar	500 to 1100 mbar or better		Barometric range	mbar	Not mentioned	
hPa		500 to 1100 hPa or better	hPa	Not mentioned				
mmHg		1 mmHg	mmHg	400 to 999.9 mmHg				
Barometric resolution	mbar	1 mbar	Barometric resolution	mbar	0.1 mmHg			
	hPa	1 hPa		hPa	Not mentioned			
Accuracy		±1%; ±0.3 C°	Accuracy		± 0.3 C°			
Salinity Compensation		3.0to 50.0 ppt or better	Salinity Compensation		0-70 ppt			

Calibration		1 or 2 points		Calibration		Not mentioned
Memory		30 Sets, last calibration data		Memory		50 data Sets
Power		4 X AAA, 250 hrs		Power		2 alkaline C-cells providing 400hrs of battery
Display IP rating		Liquid crystal IP54 or better		Display IP rating		Not mentioned
Input Materials		BNC; Cinch (NTC 30 kΩ) ABS		Input Materials		Not mentioned

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				Model: HI-9147-04 Country of Origin: USA (HANNA)			
3.	Measurement Range	%	0.0 to 199.9%; 200 to 400% or better	Multi Links X Office No. DI, 2 nd floor, shah plaza, asghar Mall Road, Rawalpindi, Pakistan	Measurement Range	%	0.0 to 50.0 mg/L (ppm) 0 to 600 %	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has ² quoted the specifications which not match the specifications mentioned in the tender. i. Measurement range ii. Measurement resolution
		Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L or better			Mg/L	Not mentioned	
		PPm	0.00 to 19.99; 20.0 to 45.0ppm or better			PPm	0.0 to 50.0	
		Temp %	0 to 50 C° 0.1%; 1% or better			Temp %	saturation 0.0 to 50.0 C° Not mentioned	

Measurement Resolution	mg/L ppm Temp mmHg	0.01 mg/L; 0.1mg/L or better 0.01ppm; 0.1 ppm or better 0.1 C° 375 to 825mmHg or better	Measurement Resolution	mg/L ppm Temp mmHg	01 mg/L 01 ppm 1C° Not mentioned	iii. Barometric range iv. Barometric resolution v. Display IP rating vi. Input material vii. Memory
Barometric range	mbar hPa mmHg	500 to 1100 mbar or better 500 to 1100 hPa or better 1 mmHg	Barometric range	mbar hPa mmHg	Not mentioned Not mentioned Not mentioned	
Barometric resolution	mbar hPa	1 mbar 1 hPa	Barometric resolution	mbar hPa	Not mentioned Not mentioned	
Accuracy		±1%; ±0.3 C°	Accuracy		±0.2 C°; ±1F°	
Salinity Compensation		4.0 to 50.0 ppt or better	Salinity Compensation		0 to 51 g/L (ppt) (1g/L resolution)	
Calibration		1 or 2 points	Calibration		Manual in saturated air	
Memory		30 Sets, last calibration data	Memory		Not mentioned	
Power		4 X AAA, 250 hrs	Power		1.5V AAA(3) 1000 hr. (approx.)	
Display IP rating		Liquid crystal IP54 or better	Display IP rating		Not mentioned	
Input Materials		BNC; Cinch (NTC 30 kΩ) ABS	Input Materials		Not mentioned	

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons	
					D.O Meter				
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				A. Model: YSI ECOSENSE DO 200 Country of Origin: USA				
4 (A)	Measurement Range	%	0.0 to 199.9%; 200 to 400% or better	Lab-Link International 13-Jan Muhammad road, near Bombay center, New anarkali Lahore.	Measurement Range	%	0 to 200%	This firm has quoted specifications of D.O meter which match the approved specifications of the Department for D.O meter. Thus, this firm is RECOMMENDED for purchase of said item.	
		Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L or better			Mg/L	0 to 20 mg/L		
		PPm	0.00 to 19.99; 20.0 to 45.0ppm or better			PPm	0 to 20 ppm,		
	Temp %	0 to 50 C° 0.1%; 1% or better	Temp %			-6 to 46 C° Not mentioned			
	Measurement Resolution	mg/L	0.01 mg/L; 0.1mg/L or better			Measurement Resolution	mg/L		0.01 mg/L
		ppm	0.01ppm; 0.1 ppm or better				ppm		0.01 ppm
Temp mmHg		0.1 C° 375 to 825mmHg or better	Temp mmHg	0.1 C° 450 to 825 mmHg (manual)					
Barometric range	mbar	500 to 1100 mbar or better	Barometric range	mbar	600 to 1100 mbar (manual)				
	hPa	500 to 1100 hPa or better		hPa	600 to 1100 pha				
	mmHg	1 mmHg		mmHg	Not mentioned				
Barometric resolution	mbar	1 mbar	Barometric resolution	mbar	1 mbar				
	hPa	1 hPa		hPa	1 hpa				
Accuracy		±1%; ±0.3 C°	Accuracy		± 0.3 C° ±1 digit				

Salinity Compensation	5.0 to 50.0 ppt or better	Salinity Compensation	0.0 to 40.0 ppt
Calibration	1 or 2 points	Calibration	Yes
Memory	30 Sets, last calibration data	Memory	50 data set reviewable
Power	4 X AAA, 250 hrs	Power	One 9 volt
Display IP rating	Liquid crystal IP54 or better	Display IP rating	Liquid crystal IP 67 (water proof)
Input Materials	BNC; Cinch (NTC 30 k Ω) ABS	Input Materials	Not mentioned

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				B. Model: YSI PRO 20 Sensor Country of Origin: USA			
4 (B)	Measurement Range	% Mg/L PPm Temp %	0.0 to 199.9%; 200 to 400% or better 0.00 to 19.99; 20.0 to 45.0 mg/L or better 0.00 to 19.99; 20.0 to 45.0ppm or better 0 to 50 C° 0.1%; 1% or better	Lab-Link International 13-Jan Muhammad road, near Bombay center, New anarkali Lahore.	Measurement Range	% Mg/L PPm Temp %	0 to 500% air saturation 0 to 50 mg/L 0 to 50 mg/L -5 to 70 C° Not mentioned	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has quoted the specifications which not match the specifications mentioned in the tender. i. Measurement range ii. Measurement resolution


Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				Model: BANTE 980 Country of Origin: China/USA			
5	Measurement Range	%	0.0 to 199.9%; 200 to 400% or better	Scientific Technical LG-2, 3-4 & 6 queens center 33- shahra-e-fatima Jinnah (queens road Lahore)	Measurement Range	%	Not mentioned	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has quoted the specifications which not match the specifications mentioned in the tender. i. Measurement range ii. Measurement resolution iii. Barometric range iv. Barometric resolution v. Memory vi. Display IP rating vii. Input material
		Mg/L	0.00 to 19.99; 20.0 to 45.0 mg/L or better		Mg/L	0.00~20.00mg/L		
		PPm	0.00 to 19.99; 20.0 to 45.0ppm or better		PPm	0.00~20.00mg		
		Temp %	0 to 50 C° 0.1%; 1% or better		Temp %	Not mentioned Not mentioned		
	Measurement Resolution	mg/L	0.01 mg/L; 0.1mg/L or better		Measurement Resolution	mg/L	0.01 mg/L	
		ppm	0.01ppm; 0.1 ppm or better			ppm	Not mentioned	
		Temp mmHg	0.1 C° 375 to 825mmHg or better			Temp mmHg	Not mentioned Not mentioned	
Barometric range	mbar	500 to 1100 mbar or better	Barometric range	mbar	Not mentioned			
	hPa	500 to 1100 hPa or better		hPa	60.0~112.5 KPa			
	mmHg	1 mmHg		mmHg	450~850 mmHg			
Barometric resolution	mbar	1 mbar	Barometric resolution	mbar	Not mentioned			
	hPa	1 hPa		hPa	Not mentioned			
Accuracy		±1%; ±0.3 C°	Accuracy		+0.2%			

Measurement Resolution	mg/L ppm Temp mmHg	0.01 mg/L; 0.1mg/L or better 0.01ppm; 0.1 ppm or better 0.1 C° 375 to 825mmHg or better		Measurement Resolution	mg/L ppm Temp mmHg	0 to 50 mg/L 0 to 50 mg/L 0.1 C° Not mentioned	iii. Barometric range iv. Barometric resolution v. Accuracy vi. Calibration vii. Display IP rating viii. Input material
Barometric range	mbar hPa mmHg	500 to 1100 mbar or better 500 to 1100 hPa or better 1 mmHg		Barometric range	mbar hPa mmHg	Not mentioned Not mentioned 375 to 825 mmHg	
Barometric resolution	mbar hPa	1 mbar 1 hPa		Barometric resolution	mbar hPa	Not mentioned	
Accuracy		±1%; ±0.3 C°		Accuracy		Not mentioned	
Salinity Compensation		6.0 to 50.0 ppt or better		Salinity Compensation		0-70 ppt	
Calibration		1 or 2 points		Calibration		Not mentioned	
Memory		30 Sets, last calibration data		Memory		50 data set, dated and time Stamp	
Power		4 X AAA, 250 hrs		Power		2 alkaline C cells providing 400 hrs. of battery life	
Display IP rating		Liquid crystal IP54 or better		Display IP rating		Not mentioned	
Input Materials		BNC; Cinch (NTC 30 kΩ) ABS		Input Materials		Not mentioned	

Salinity Compensation		7.0 to 50.0 ppt or better	Salinity Compensation		0 ~ to 50 g/L
Calibration		1 or 2 points	Calibration		1 or 2 points
Memory		30 Sets, last calibration data	Memory		Not mentioned
Power		4 X AAA, 250 hrs	Power		DC 5 Volt, Using AC adapter, 220 V AC/ 50 Hz
Display IP rating		Liquid crystal IP54 or better	Display IP rating		Not mentioned
Input Materials		BNC; Cinch (NTC 30 k Ω) ABS	Input Materials		Not mentioned

Sr. #	Approved Specification of the Department			Name of the Firm & Address	Specification/Brand/Model quoted by the Firm			Remarks/Recommendation with reasons
					D.O Meter			
	Origin of Brand: West Europe, China, USA, Japan & Canada etc.				Model: DPO-408 Country of Origin: TAIWAN			
6.	Measurement Range	% Mg/L PPm Temp %	0.0 to 199.9%; 200 to 400% or better 0.00 to 19.99; 20.0 to 45.0 mg/L or better 0.00 to 19.99; 20.0 to 45.0ppm or better 0 to 50 C° 0.1%; 1% or better	Pak Glorious Enterprises Flat #305, Muhammadia plaza, Gordon college road, Rawalpindi	Measurement Range	% Mg/L PPm Temp %	0~200.0 % 0~20.00mg/L Not mentioned 0~150 C° Not mentioned	This firm is NOT RECOMMENDED for purchase of D.O meter due to following reasons that it has quoted the specifications which not match the specifications mentioned in the tender.

Measurement Resolution	mg/L ppm Temp mmHg	0.01 mg/L; 0.1mg/L or better 0.01ppm; 0.1 ppm or better 0.1 C° 375 to 825mmHg or better		Measurement Resolution	mg/L ppm Temp mmHg	0.01 mg/L Not mentioned 0.1 C° Not mentioned	ii. Measurement resolution iii.Barometric range iv.Barometric resolution v. Calibration vi.Input material vii. Memory
Barometric range	mbar hPa mmHg	500 to 1100 mbar or better 500 to 1100 hPa or better 1 mmHg		Barometric range	mbar hPa mmHg	Not mentioned Not mentioned Not mentioned	
Barometric resolution	mbar hPa	1 mbar 1 hPa		Barometric resolution	mbar hPa	Not mentioned	
Accuracy		±1%; ±0.3 C°		Accuracy		± 0.2 C +1 digit	
Salinity Compensation		8.0 to 50.0 ppt or better		Salinity Compensation		MSC 0~ to 50 ppt	
Calibration		1 or 2 points		Calibration		Not mentioned	
Memory		30 Sets, last calibration data		Memory		Not mentioned	
Power		4 X AAA, 250 hrs		Power		9 Volt Battery	
Display IP rating		Liquid crystal IP54 or better		Display IP rating		LCD	
Input Materials		BNC; Cinch (NTC 30 kΩ) ABS		Input Materials		Not mentioned	


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HEALTH DEVELOPMENT OF FISHERIES IN INDIA THROUGH AQUACULTURE AND FISH BIOTECHNOLOGY PROJECTS


 DEPUTY DIRECTOR FISHERIES (P&D)
 HEADQUARTER LAHORE