

	ACCREDITATION DOCUMENT	F-06/06 Issue Date: 30-03-2017 Rev. No: 01 ML 009
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Accreditation No: ML 009

Awarded to

**Dow Diagnostic Reference and Research Laboratory (DDRRL),
Dow University of Health Sciences Suparco Road Gulzar e Hijri KDA Scheme-35,
Karachi, Pakistan.**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **19-11-2014** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO 15189:2012**.

The accreditation requires regular surveillance, and is valid until **12-11-2020**.

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

13-11-2017
Date

Director General

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Medical Laboratory.

Permanent laboratory Dow Diagnostic Reference and Research Laboratory (DDRRL),
Dow University of Health Sciences Suparco Road Gulzar e Hijri KDA Scheme-35, Karachi.

Field of Medical Testing Laboratory: Medical Testing

Materials tested	Testing field (e.g. Chemical, Micro etc)	Types of test/ Properties measured	Reference to standardized method/ Internal method reference
Serum	Microbiology	ANTI HIV 1 & 2	>1.0 (positive)
		Anti HBC	>1.0 (positive)
		HBCIgM	>1.0 (positive)
		RUBELLA IgG	10 IU/ml (positive)
		RUBELLA IgM	>1.0 (positive)
		HBeAg	>1.0 (positive)

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		HBeAb	<1.0 (positive)
		HAV Total	>20 IU/ml (positive)
		HAV IgM	>1.0 (positive)
Whole Blood	Hematology	WBC	3.7-10.1 x 10e3/ul
		RBC	4.0-4.6 x 10e6/ul
		Hb	12.9-14.2g/dl
		HCT	37.7-53.7%
		MCV	81.1-96.0 Fl

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		MCH	27.0-31.2pg
		MCHC	31.8-35.4g%
		RDW	11.5-14.5 %
		PLT	155-366 x 10 e3/ul
		MPV	6.9-10.6 Fl
		ESR	M=0-15 mm/hr F=0-22 mm/hr
Serum	Molecular Pathology	HCV Qaulitative Test	Positive/ Negative
		HCV Qauntitative / Viral Load	Upper quantification Limit > 100,000,000 Iu/ml Lowe quantification Limit <12 Iu/ml
		HBV Qauntitative / Viral Load	Upper quantification Limit >1,000,000,000 Iu/ml Lowe quantification Limit <10 Iu/ml

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		HCV Genotyping	Genotype 1-6
Serum	Chemical Pathology	AFP	< 8.5 ng/mL
		CA125	< 35 U/mL
		CEA	Smoker < 5 Non Smoker < 3
		CORTISOL	M: 5.0—23.0 ug/dL E: 3.0---16.0 ug/dL
		FSH	Adult Male: 1.4—15.4 mIU/mL Adult Female Follicular Phase: 1.4—9.9 mIU/mL Mid Cycle Peak: 0.2—17.2 mIU/mL Luteal Phase: 1.1—9.2 mIU/mL Postmenopausal: 19.3—100.6 mIU/mL
		β-HCG	Male And Non Pregnant Female: 0.0-50 mIU/mL Pregnancy Week Of Gestational Ranges: 4 Weeks: 5—100 mIU/mL 5 Weeks 200-3000 mIU/mL 6 Weeks 10000—80000 mIU/

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			7-14 Weeks 90000—500000 mIU/mL 15—26 Weeks 5000—800000 mIU/mL 27—40 Weeks 3000--15000 mIU/mL
		INSULIN	2—25 uIU/mL
		LH	Adult Male: 1.2—7.8 mIU/mL Adult Female Follicular Phase: 1.7—15.0 mIU/mL Mid Cycle Peak: 21.9—56.6 mIU/mL Luteal Phase: 0.6—16.3 mIU/mL Postmenopausal: 14.2—52.3 mIU/mL
		VALPROIC ACID	50—10 ug/mL
		CARBAMEZEPINE	4—12 ug/mL
		PROLACTIN	Male: 3.0—14.7 ng/mL Female: 3.8—23.0 ng/mL Pregnant Female: 3rd Trimester 95—473 ng/mL
		TOTAL PSA	40-49yr 0—2.5 ng/mL 50-59yrs 0—3.5 ng/mL 60-69yrs 0—4.5 ng/mL 70-79yrs 0—6.5 ng/mL

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		FT3	Child and Adult 2.10—4.40 pg/mL
		FT4	Newborn 2.2—5.3 ng/mL Children 0.8—2.0 ng/mL Adult 0.8—2.7 ng/mL
		TT3	Adult 1.08—3.14 nmol/L
		TT4	Adult Male 4.6—10.5 ug/dL Adult Female 5.5—11.0
		TSH	Birth—4days 1.0—39 uIU/mL 2-20 Weeks 1.7—9.1 uIU/mL 21 Weeks—20Yrs 0.7—6.4 uIU/mL 21—54yrs 0.4—4.2 uIU/mL 55-87yrs 0.5—8.9 uIU/mL
		Vitamin D	Vitamin D Deficiency < 10 ng/mL Vitamin D insufficiency 10-30 ng/mL Vitamin D sufficiency >=30 ng/mL Vitamin D intoxication >150 ng/mL
		Vitamin B12	206—678 pg/mL

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		Ferritin	Adult Male 20—250 ng/mL Adult Female 10—120 ng/mL Newborn 25—200 ng/mL 1 month 200-600 ng/mL 2-5 Month 50—200 ng/mL 6 Month 7—140 ng/mL
		IgE	Neonates < 1.5 IU/mL 1yr < 15 IU/mL 1-- yrs < 60 IU/mL 6--9yrs < 92 IU/mL 10—15yrs < 200 IU/mL Adults 0—16 IU/mL
		Albumin	3.5—5.2 g/dL
		ALT	<34 uIU/mL
		ALP	42—98 U/I
		AST	< 31 U/I
		BILI TOTAL	0.2—1.2 mg/mL
		BILI DIRECT	0—0.3 mg/dL

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		CA	8.6—10.2 mg/dL
		CHOL	Desirable < 200mg/dL Borderline High 200-239 mg/dL High > 239 mg/dL
		TG	Normal < 150 mg/dL
		HDL	Low < 40mg/dL High > 60 mg/dL
		Glucose (F)	Normal < 100 mg/dL Impaired 100-125 mg/dL Diabetes mellitus = > 126 mg/dL
		Urea	17--49mg/dL
		Creatinine	0.7--1.2 mg/dL
		Total Protein	6.4—8.3 g/dL
		GGT	< 38 U/I

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		Amylase Total	28—100 U/L
		Bicarbonate	23—29 mEq/L
		CK Total	34—145 u/L
		IRON	Newborn 100—250 ug/dL Infant 59—158 ug/dL Child 37—145 ug/dL Male 50—16 ug/dL Female 40—160 ug/dL
		LDH	125—220 u/L
		Lipase	28—100 U/L
		Lithium	0.6—1.2 mEq/L Therapeutic Range
		MG	1.6—2.6 mg/dL
		Phosphorus	2.5—4.5 mg/dL

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		Uric Acid	3.5—7.2 mg/dL
		Sodium	136—146 mEq/L
		Potassium	3.5—5.1 mEq/L
		Chloride	104—114 mEq/L
Tissue	Histopathology	H&E	NA*

*NA= Not Applicable

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