

گواهینامه تایید صلاحیت آزمایشگاه
Laboratory Accreditation Certificate

The National Accreditation Center of Iran (NACI)
herewith confirms that:

**Pishgaman Andazeshshenasi Daghigh
Laboratory (PAD)**

Address: No.17, Haftom sharghi St, Kamran Kabiri Ave,
Hemmat Highway, Tehran, I.R.IRAN.

Tel: +98(21) 44495609, 44495616

Fax: +98(21) 44495818

Web Site: www.padcc.com

مرکز ملی تایید صلاحیت ایران بدینوسیله تأیید می نماید که :

آزمایشگاه پیشگامان اندازه شناسی دقیق (پاد)

نشانی: تهران، بزرگراه شهید همت، خیابان کامران کبیری، بعد از

چهارراه مخبری، خیابان هفتم شرقی، شماره ۱۷

تلفن: ۴۴۴۹۵۶۱۶ و ۴۴۴۹۵۶۰۹ - ۰۲۱

دورنگار: ۴۴۴۹۵۸۱۸ - ۰۲۱

سایت اینترنتی: www.padcc.com

Has fulfilled the **ISIRI-ISO/IEC 17025**.

And is competent to carry out ☐ Test ☒ Calibration
services according to accreditation scope are listed in
10 page/s of annex.

NACI Registration No. : NACI/Lab/177

Initial Accreditation Date and Place: 2010.01.20-Tehran

Renewal Date : 2018.12.29

Expiry Date : 2021.12.28

Validity of Accreditation Certificate depends on
continuity of compliance with the relevant requirements
and obtaining the approval based on the annual
surveillance assessment.

الزامات استاندارد ایران - ایزو/آی ای سی ۱۷۰۲۵ را رعایت نموده است.

و صلاحیت انجام خدمات آزمون ☐ کالیبراسیون ☒ مطابق دامنه
کاربردی که جزئیات آن در ۱۰ برگ پیوست آمده است را داراست.

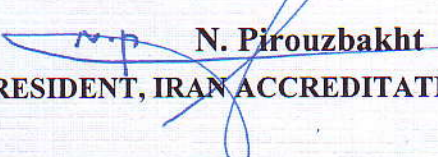
شماره گواهینامه تایید صلاحیت : NACI/Lab/۱۷۷

تاریخ و محل صدور اولیه گواهینامه : ۱۳۸۸/۱۰/۳۰ - تهران

تاریخ صدور مجدد گواهینامه : ۱۳۹۷/۱۰/۰۸

تاریخ خاتمه اعتبار گواهینامه : ۱۴۰۰/۱۰/۰۷

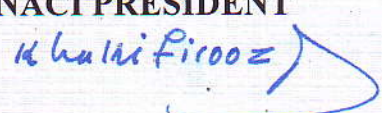
حفظ اعتبار در طول دوره منوط به استمرار انطباق با ضوابط مربوطه و
اخذ تاییدیه در ارزیابی های مراقبتی سالانه است.

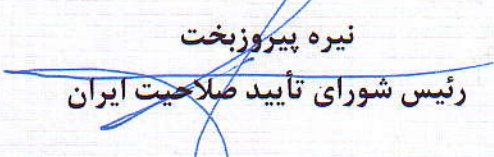

N. Pirouzbakht

PRESIDENT, IRAN ACCREDITATION COUNCIL

A.R. Khakifirooz

NACI PRESIDENT

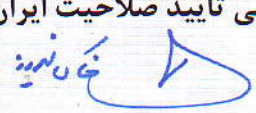

A.R. Khakifirooz


نیره پیروزبخت

رئیس شورای تایید صلاحیت ایران

علیرضا خاکی فیروز

رئیس مرکز ملی تایید صلاحیت ایران


علیرضا خاکی فیروز

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

1-Temperature

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Thermometer, Thermocouple Temperature Sensor	(-40 to 25)°C	0.13 °C
		(25 to 100)°C	0.09 °C
		(100 to 250)°C	0.13 °C
		(250 to 600)°C	0.39 °C
		(600 to 1100)°C	1.49 °C
		(1100 to 1200)°C	2.05 °C
2	Thermometer, RTD Temperature Sensor	(-40 to 25)°C	0.13 °C
		(25 to 100)°C	0.09 °C
		(100 to 250)°C	0.13 °C
		(250 to 600)°C	0.39 °C
3	Liquid in Glass, Bimetal & Filled System Thermometer	(-40 to 25)°C	0.13 °C
		(25 to 100)°C	0.09 °C
		(100 to 250)°C	0.13 °C
4	Environmental Thermometer	(-30 to 60)°C	0.20 °C
5	Bath & Furnace's Calibrator	(-40 to 25)°C	0.12 °C
		(25 to 100)°C	0.07 °C
		(100 to 250)°C	0.09 °C
		(250 to 600)°C	0.27 °C
		(600 to 1100)°C	1.44 °C
		(1100 to 1200)°C	1.95 °C
6	Oven, Incubator, Bath, Chamber, Industrial Furnace	(0 to 100)°C	0.13 °C
		(100 to 250)°C	0.14 °C
		(250 to 600)°C	0.51 °C

A.R. Khakifirooz
NACI PRESIDENT

Khakifirooz

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

No.	Quantity, Measuring Instrument, Material Measure		Range	Capability Measurement and Calibration (±)	
			(600 to 1100)°C	1.52 °C	
			(1100 to 1200)°C	2.1 °C	
7	Freezer, Refrigerator		(-40 to 20)°C	0.15 °C	
8	Autoclave	Temperature	(80 to 140)°C	0.1 °C	
		Pressure	(Up to 4)bar	0.05% FS	
9	Temperature Switch		(-40 to 250)°C	0.13 °C	
10	Simulator & Indicator	Thermocouple	J	(-210 to 1200)°C	0.16 °C
			K	(-270 to 1370)°C	0.17 °C
			T	(-270 to 400)°C	0.12 °C
			R	(-50 to 1760)°C	0.29 °C
			S	(-50 to 1760)°C	0.29 °C
			B	(50 to 1820)°C	0.48 °C
			C	(0 to 2300)°C	0.43 °C
			G	(0 to 2300)°C	0.53 °C
			D	(0 to 2300)°C	0.53 °C
			U	(-200 to 400)°C	0.12 °C
			L	(-200 to 760)°C	0.14 °C
			N	(-270 to 1300)°C	0.17 °C
			E	(-270 to 1000)°C	0.15 °C
			F	(0 to 1400)°C	0.17 °C
		RTD	Pt100	(-200 to 850)°C	0.09 °C
			Pt200	(-200 to 850)°C	0.19 °C
			Pt500	(-200 to 850)°C	0.14 °C
			Pt1000	(-200 to 850)°C	0.14 °C

A.R. Khakifirooz
NACI PRESIDENT

Khakifirooz

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD) Laboratory

No.	Quantity, Measuring Instrument, Material Measure		Range	Capability Measurement and Calibration ($\pm$)
		CU10	$(-70 \text{ to } 150)^{\circ}\text{C}$	0.42°C
		CU100	$(-180 \text{ to } 150)^{\circ}\text{C}$	0.07°C
		Ni100	$(-60 \text{ to } 180)^{\circ}\text{C}$	0.07°C
		Ni120	$(0 \text{ to } 150)^{\circ}\text{C}$	0.07°C

2- Humidity

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Humidity Chamber	$(11 \text{ to } 98)\% \text{ RH}$	$1.3\% \text{ RH}$
2	Humidity With Salt Standard	$(11.3, 33.0, 75.3)\% \text{ RH}$	$1.0\% \text{ RH}$
		$(23, 43, 53, 69, 85, 93, 98)\% \text{ RH}$	$0.8\% \text{ RH}$
3	Humidity Calibration Capsule	$(11, 33, 75)\% \text{ RH}$	$1.3\% \text{ RH}$

3- Mass

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Weight	1 mg	$6.5 \mu\text{g}$
		2 mg	$5.8 \mu\text{g}$
		5 mg	$7.6 \mu\text{g}$
		10 mg	$7.0 \mu\text{g}$
		20 mg	$5.9 \mu\text{g}$
		50 mg	$9.0 \mu\text{g}$
		100 mg	$9.1 \mu\text{g}$
		200 mg	$8.4 \mu\text{g}$


 A.R. Khakifirooz
 NACI PRESIDENT


 N. Pirouzbakht
 PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD) Laboratory

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Weight	500 mg	7.2 μ g
		1 g	10.1 μ g
		2 g	9.4 μ g
		5 g	9.4 μ g
		10 g	12.4 μ g
		20 g	17.2 μ g
		50 g	31.3 μ g
		100 g	70.2 μ g
		200 g	85.3 μ g
		500 g	626.0 μ g
		1 kg	1.34 mg
		2 kg	6.30 mg
		5 kg	8.72 mg
		10 kg	59.21 mg
		20 kg	62.94 mg
2	Balance	(1 to 500)mg	(0.80 to 7.10) μ g
		(500 to 1000)mg	(4.37 to 8.47) μ g
		(1 to 50)g	(7.73 to 65.49) μ g
		(50 to 100)g	(65.49 to 131.62) μ g
		(100 to 200)g	(131.62 to 239.62) μ g
		(200 to 500)g	(239.62 to 626.66) μ g
		(500 to 1000)g	(626.66 to 1200.81) μ g
		(1 to 5)kg	(1.2 to 6.5)mg

A.R. Khakifirooz
NACI PRESIDENT

Khakifirooz

N. Pirouzbakht
 PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
2	Balance	(5 to 10)kg	(6.5 to 13.2)mg
		(10 to 20)kg	(13.2 to 25.1)mg
		(20 to 100)kg	(25.1 to 125.4)mg
	Bascule	100 kg to 5 t	---

4-Pressure

No.	Quantity, Measuring Instrument, Material Measure		Range	Capability Measurement and Calibration ($\pm$)
1	Vacuum Gauge & Pneumatic Pressure Gauge with Elastic		(-0.85 to 2)bar	0.058% SF
	Vacuum Gauge & Pressure Gauge(absolute)		(-0.85 to 2)bar	0.058% rdg
	Pressure Gauge with Elastic	Pneumatic	(2 to 70)bar (70 to 150)bar	0.058% SF
		Hydraulic	Up to 700 bar	0.015% rdg
2	Hydraulic Electromechanical Pressure Gauge		Up to 700 bar	0.03% rdg
3	Pressure Switch Performance Test		Up to 150 bar	0.058% rdg
4	Liquid's Column Pressure Gauge		(-0.85 to 2)bar	0.058% rdg

5-RPM

No.	Quantity, Measuring Instrument, Material Measure		Range	Capability Measurement and Calibration ($\pm$)
1	Tachometer	Contact	Up to 5000 RPM	0.06% rdg
		Noncontact (Optical)	Up to 40000 RPM	0.05% rdg
2	RPM Measurement	Contact	Up to 4000 RPM	(0.058% rdg + 1 dig)
		Noncontact (Optical)	Up to 24000 RPM	(0.058% rdg + 1 dig)

A.R. Khakifirooz
 NACI PRESIDENT

N. Pirouzbakht
 PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

6- pH

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	pH meter	Up to 14 pH	0.004 pH
		(-500 to 500) mV	0.04 mV
2	pH Measurement	Up to 14 pH	0.004 pH
3	pH Buffer	Up to 14 pH	0.006 pH

7- Refractive Index

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Refractometer	(1.33297 to 1.61736)nD	0.00005 nD
		Up to 70% Brix	0.02% Brix
2	Brix meter	Up to 70% Brix	0.02% Brix

8- Density

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Alcohol meter	Up to 100% Vol	0.1% Vol
2	Densitometer	(0.6 to 1.85)g/ml	0.0004 g/ml

9- Conductivity

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Conduct meter with Conductivity Cell	Up to 100 μ S/Cm	1.0 μ S/cm
		(100 to 2000) μ S/Cm	5.9 μ S/cm
		(2000 to 20000) μ S/Cm	20 μ S/cm
		(20 to 200)mS/Cm	1.6 mS/cm
2	Deionizer	(0.05 to 20) μ S/Cm	50% rdg

A.R. Khakifirooz
NACI PRESIDENT

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

10- DO

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	DO meter	(0 to 100)%	0.3 %
		(0 to 20) mg/l	0.03 mg/l

11- Chlorine

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Chlorine	(0 to 30)ppm	(0.01 to 0.2)ppm

12- Wavelength & Photometric Absorbance

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Spectrophotometer	Absorbance (UV)	(0.010 to 2.999)A
		Absorbance (visible)	(0.010 to 2.0)A
		Wavelength	(190 to 900)nm
2	Turbidimeter	(0.1 to 7500) NTU	(0.11 to 0.4)nm
			0.2% rdg

13-COD

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	COD meter	Up to 1000 ppm	0.013% rdg

A.R. Khakifirooz
NACI PRESIDENT

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD)Laboratory

14- Titrator & Karl Fischer

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Karl Fischer	(0.01 to 100)%	(0.001 to 0.06)%
2	Potentiometric Titrator	Up to 14 pH	0.004 pH
		(-2000 to 2000) mV	0.04 mV
		(0.1 to 20) ml	(0.0001 to 0.001) ml

15- BOD

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	BOD meter	Up to 4000 ppm	(0.06 to 35) ppm

16- Polarimeter

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Polarimeter	(-100 to 100)°Z	0.01 °Z

17- Viscosity

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Rotary Viscometer	Up to 60000 cP	(0.5 to 1)% rdg

18- Butyrometer

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Butyrometer	(0 to 90)% Fat	0.002 % Fat

A.R. Khakifirooz
NACI PRESIDENT

A.R. Khakifirooz

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD) Laboratory

19- GC

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Qualification of GC	Verification of Flow	Up to 1000 ml/min
		Oven	Up to 300°C
		Verification of Detector	FID-TCD
			1% rdg
			0.15°C
			1%rdg

20- HPLC

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Qualification of HPLC	Verification of Flow	0.05 to 20 ml/min
		Oven	(25 to 100)°C
		Verification of Gradient	Up to 100%
		Verification of Detector (Wavelength)	(200 to 700)nm
		Verification of Detector (Absorbance)	(0.01 to 1.5) A
		Verification of Detector (Refractive Index)	(1.33297 to 1.61736)nD
		Verification of Detector (Fluorescence)	Up to 5 ppm
			5µl/min
			0.15°C
			0.004%
			0.22 nm
			1%
			0.00005 nD
			1% rdg

21- Volum

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Burette	(1 to 100)ml	(0.0001 to 0.01)ml
2	Graduated Pipette and Bulb Pipette	(0.1 to 100)ml	(0.00007 to 0.01)ml
3	Graduated Cylinder	(5 to 500)ml	(0.003 to 0.01)ml
		(500 to 5000)ml	(0.01 to 0.1)ml
4	Dispenser	(0.5 to 100)ml	(0.0001 to 0.01)ml
5	Syringe	(1 to 10) µl	(0.07 to 0.1) µl
		(10 to 1000) µl	(0.1 to 1) µl
6	Micropipette-Sampler	(1 to 10) µl	(0.07 to 0.1) µl

A.R. Khakifirooz
NACI PRESIDENT

N. Pirouzbakht
PRESIDENT, IRAN ACCREDITATION COUNCIL

Laboratory Accreditation Certificate

Annex

Accreditation Scope of Pishgaman Andazeshshenasi Daghigh Laboratory (PAD) Laboratory

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
		(10 to 10000) μ l	(0.1 to 1) μ l
7	Volumetric Flask	(5 to 500)ml	(0.0001 to 0.01)ml
		(500 to 10000)ml	(0.01 to 0.1)ml
8	Pycnometer	(5 to 100)ml	(0.0001 to 0.01)ml
9	Modular containers	(10 to 20000)ml	(0.001 to 2.5)ml

22- Dimention

No.	Quantity, Measuring Instrument, Material Measure	Range	Capability Measurement and Calibration ($\pm$)
1	Internal Caliper	Up to 100 mm	(0.026 L + 0.05) μ m (L in mm)
		(100 to 300)mm	(0.027 L + 0.1) μ m (L in mm)
2	External Caliper	Up to 100 mm	(0.026 L + 0.03) μ m (L in mm)
		(100 to 1000)mm	(0.027 L + 0.1) μ m (L in mm)
3	Depth Gauge Caliper	Up to 100 mm	(0.019 L + 0.82) μ m (L in mm)
		(100 to 300)mm	(0.026 L + 0.13) μ m (L in mm)
4	Internal Micrometer	Up to 100 mm	(0.026 L + 0.05) μ m L in mm)
		(100 to 300)mm	(0.027 L + 0.1) μ m (L in mm)
5	External Micrometer	Up to 100 mm	(0.026 L + 0.03) μ m L in mm)
		(100 to 1000)mm	(0.027 L + 0.1) μ m (L in mm)
6	Depth Micrometer	Up to 100 mm	(0.019 L + 0.82) μ m (L in mm)
		(100 to 300)mm	(0.026 L + 0.13) μ m (L in mm)
7	Dial Indicator	Up to 25 mm	(0.035 L + 0.05) μ m (L in mm)
8	Height Gauge Caliper	Up to 100 mm	(0.019 L + 0.82) μ m (L in mm)
		(100 to 1000)mm	(0.026 L + 0.13) μ m (L in mm)
9	Level	Up to 200 mm	0.01 mm/m
10	Protractor	Up to 360°	6"
11	Sieve	(0.1 to 60)mm	(0.1L+1) μ m (L in mm)

A.R. Khakifirooz
NACI PRESIDENT

N. Pirouzbakht
 PRESIDENT, IRAN ACCREDITATION COUNCIL