FRESNO STATE
Center for Irrigation Technology

5370 North Chestnut Avenue M/S OF18
Fresno, CA 93740-8021
559.278.2066 www.fresnostate.edu/jcast/cit/

SCHEDULE OF LABORATORY TESTING FEES*

Effective March 20, 2025*

1.0 SPRINKLERS

1a	Sprinkler radial distribution pattern (indoor to a maximum radius of 100 ft.). Includes flow rate measurement at the test pressure. Per ISO 15886-3:2021	$ 500
1b	Sprinkler full grid distribution pattern. Includes measurement of the flow rate at the test pressure. Per ASABE S330.1 Feb. 2003	$ 500
1c	Micro-sprinkler or spray head radial distribution pattern (determined for 4 radial directions space 90° (degrees). Per ISO 8026:2009 (R2020)	$ 500
1d	Computerized analysis sprinkler overlapped distribution pattern	$ 50/spacing
1e	Sprinkler valve testing – Testing the functionality of valve within sprinkler	$ 500

2.0 VALVES

2a	Valve closing speed determination.	$ 500
2b	Determine valve head loss as a function of flow rate.	$ 500
2c	Valve head loss testing.	$ 500

3.0 VALVES – CHEMIGATION VALVES

3a	Chemigation valve standard test (Per Nebraska, Idaho and Minnesota rules and regulations)	$1,000

4.0 VALVES – AIR RELEASE, VACUUM RELIEF AND COMBINATION

4a	Determine the vacuum relief capacity of vacuum relief valves	$1,000
4b	Determine the air venting capacity of air release valves plus the cost of renting an air compressor	$1,500

5.0 DRIP EMITTERS

5a	Determine drip emitter manufacturing variability (100 emitters required) Per ISO 9261:2004 (R2019)	$ 500
5b	Determine a drip emitter discharge as a function of pressure (25 emitters required) Per ISO 9261:2004 (R2019)	$ 500

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5c	Determine drip emitter discharge as a function of temperature (25 emitters required) Per ISO 9261:2004 (R2019)	$ 500
5d	Combined test for drip emitters (includes test numbers 5a, 5b and 5c) Per ISO 9261:2004 (R2019)	$1,400
5e	Determine the friction loss characteristics of drip tape and collapsible tubing to sizes 1.0 in. Per ASAE S553: DEC2000 (R2017)	$ 700
5f	Drip emitter third-party inspection	$ 200 per hr

6.0 DRIP EMITTERS – INORGANIC PARTICLE PLUGGING

6a	Testing to characterize emitter plugging susceptibility (Per CIT protocol – range of grit sizes 0.0029 to 0.0165 in./control sieve)	$ 500

7.0 FILTERS – SCREEN, DISC AND MEDIA

7a	Sand Media Filtration Device Testing a. With media b. Without media	 $2,000 per test $1,500 per test

8.0 CONTROLLERS – SOIL MOISTURE BASED

8a	Landscape irrigation soil moisture-based control technologies. Per ANSI/ASABE S633 MAY2020	$6,000

9.0 EPA WATERSENSE CONTROLLERS

9a	Testing for EPA WaterSense® labeling to November 3, 2011 testing protocol Climatologically-based controllers.	$3,000
9b	Testing for EPA WaterSense® labeling to February 2021 testing protocol Soil moisture-based irrigation controllers.	$6,000

10.0 EPA WATERSENSE SPRAY SPRINKLER BODY

10a	Testing for EPA WaterSense® labeling to Specification for Spray Sprinkler Bodies Version 1.0 September 21, 2017	$2,500

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11.0 WATER METERS

11a	Flowmeter accuracy and performance	$1,000

12.0 FIRE HYDRANTS

12a	Fire hydrant: head loss	$1,500

13.0 BURST-TEMPERATURE SENSITIVITY/PLASTIC COMPONENTS & TUBING

13a	Determine hydrostatic burst pressure of system components (to 3,000 psi)	$1,000
13b	Burst testing of PVC joints	$ 500
13c	Pressurized tape/tubing burst testing	$ 500

14.0 ENVIRONMENTAL STRESS CRACK RESISTANCE (ESCR)

14a	Environmental stress crack resistance test	$ 1,200

15.0 HYDROCYCLONE BASED SEPARATION

15a	Testing to determine separator effectiveness. Applicable to hydrocyclones and ring and screen filters. Includes head loss and efficiency *(Component size to 2 in. and smaller. For components larger than 2 in., contact the laboratory manager)*	$1,000

16.0 PUMPS – ROTODYNAMIC

16a	Pump test	$2,000 per test

17.0 SPECIAL TESTING

17a	Long term equipment failure testing (time to failure)	Contact CIT

Areas of expertise include:

- Failure analysis
    1. Pressure ruptured system components

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2. Plugging of components
3. Components damaged by insects or other organisms
4. Failures caused by mechanical forces or corrosion
5. Improper design procedures

- Development of testing protocols that define component performance
  1. Performance data for system design
  2. Product data for sales literature
  3. Creates a basis for product differentiation

- Testing product performance as relates to USA and international standards requirements (ISO, ANSI, ASABE, ASSE, IADMO, ASTM, IA, etc.)

FEES:

Laboratory setup fee (this will be initiated prior to testing)	$ 100
Laboratory rental	$ 200/hr
Laboratory time for testing technicians	$ 75/hr
Laboratory time for testing managers	$ 125/hr
Laboratory time for supervising engineer	$ 150/hr

TERMS:

- Payable in US dollars through a US bank, Net 30 days

* Fees are subject to change without notice. The testing fee(s) will be based on the pricing in effect on the date services are contracted. Volume discounts are available. Contact CIT for more information.