

UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY

Policy No.: FS026	Approved by: Mark Cavanaugh
Title: Anti-Freeze System Test Procedure	Date: 10/10/2022
Revision No.: 4	Page 1 of 3
Prepared by: Mark Militello	No changes – 10/10/2022
EH&S Department Use Only: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	UR Website: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Public <input checked="" type="checkbox"/> No Restricted

I. PURPOSE

This procedure establishes the proper steps for completing the annual test for anti-freeze systems at the University.

II. PERSONNEL AFFECTED

This procedure affects the Fire Safety staff. Specifically, for the systems located at the Kornberg Medical Research Building (B-9905), Delmonte Institute (Adjacent to 5-11220) and the Medical Center Annex (Stair 4B100Y, Corridor ceiling adjacent 3B342, room 2B100Y—2 systems, and ceiling vestibule 1B146).

III. DEFINITIONS

Antifreeze Sprinkler System. A wet pipe sprinkler system employing automatic sprinklers that are attached to a piping system that contains an antifreeze solution and that are connected to a water supply.

IV. RESPONSIBILITIES

The Fire Safety personnel conducting this test are responsible for following the proper procedures and for contacting Public Safety Dispatch when the test begins and ends.

V. PROCEDURES

- A. Obtain the refractometer from the gray/red tool cabinet located in the Fire Safety storage area.
- B. Contact Public Safety Dispatch (x5-3333) to inform them that testing is being done and the need to bypass the fire alarm panel in the area where the system is located.
- C. Disable each point per the fire alarm disable enable procedures.
- D. Proceed to the system to be tested.
- E. Close the control valve for the system and remove the plug adjacent to the ½ inch test valve.
- F. Using a small cup, slowly open the test valve so that a small amount of solution empties into the cup. Close the test valve.
- G. Using the small tube pump on the refractometer, draw solution into the tube.
- H. Place a few drops of the solution on to the measuring surface of the refractometer and close View Point Illuminator cover.
- I. To take a reading, point the refractometer toward any light source and look into the eyepiece. The scale is reversed from a standard thermometer scale. Readings below zero are on the upper half of the scale. The readings are taken

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where the dark and light portions of the scale meet. Use the right hand side of the scale.

- J. Once a reading has been obtained record the temperature on the building sprinkler test sheet along with the date of the test.
- K. Wipe the measuring surface with a clean cloth or tissue.
- L. Replace the plug on the system and open the system control valve.
- M. If the temperature obtained is +32 degrees or greater then issue a facilities work order to have the solution changed.
- N. Once all systems for the given fire alarm panel have been tested, and control valves have been re-opened, return to the fire alarm panel and restore the panel to normal. Verify with Public Safety that they show the fire alarm is normal.

VI. REFERENCES

- NFPA 13 Standard for the Installation of Sprinkler Systems
- NFPA 25 Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
- Fire Alarm Procedure Documents—
 - Kornberg Medical Research Building Simplex 4100U
 - Delmonte Institute Simplex 4100U
 - Medical Center Annex Simplex 4100U
- Sprinkler Test Reports—
 - Kornberg Medical Research Building
 - Delmonte Institute (MRBX)
 - Medical Center Annex

VII. APPENDICES/FORMS

Building Name	Location	Rooms/Areas protected	System Mixture	Temperature
MC Annex	Mechanical Room 2 nd floor (2A228) at West End	Wood frame garage (west garage) adjacent to Annex	50/50 Glycerin	Minus 15F
MC Annex	Mechanical Room 2 nd floor (2A228) at East End	Metal frame garage (east garage) adjacent to Annex	50/50 Glycerin	Minus 15F
MC Annex	4B100W stairs	Top of elevator shaft	50/50 Glycerin	Minus 15F
MC Annex	3 rd Floor Corridor by B342	Same elevator shaft portion between 3 rd floor and top of same	50/50 Glycerin	Minus 15F
MC Annex	1 st Floor Vestibule (1B146)	Loading dock area	50/50 Glycerin	Minus 15F

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Building Name	Location	Rooms/Areas protected	System Mixture	Temperature
KMRB	B-9905 Mechanical Room – Glycol Loop	Basement Plenum area	50/50 GL48	Minus 15F
Delmonte Institute (MRBX)	Penthouse Mezzanine - Glycol Loop	Emergency Generator Room	50/50 GL48	Minus 15F

VIII. REVISION HISTORY

Date	Revision No.	Description
1/18/2011	New	Initial development of this policy
1/17/2013	1	Addition of table under Appendices/Forms
11/20/2018	2	Clarified multiple steps
10/3/2019	3	Addition of details for locations
10/10/2022	4	Triennial Review – No changes