

Smart Notes



Is the use of hydrocarbon refrigerants in laboratory refrigerators and freezers safe?

Two refrigerant gases (R290 and R170) are on the SNAP approval list for use in refrigeration applications. While R-290 and R-170 are flammable gases, their use has been reviewed as safe for refrigeration use when the requirements for construction and testing are met as called out by US and Canadian safety standards.

Underwriters Laboratories is an industry leader in safety standards and safety testing. After successfully passing all safety testing, UL authorizes ultra-low freezers and laboratory refrigerators to bear the UL safety mark for North America. Safety testing at UL included passing a rigorous hydrocarbon refrigerant leak test to demonstrate the design is safe in the unlikely event of a refrigerant leak.





Thermo Scientific™ TSX Series, TSG Series, and STP Series lines of laboratory refrigerators/freezers and ultra-low freezers use natural, hydrocarbon refrigerants.

Safety is a priority for all of our products. The Thermo Scientific TSX, TSG, and STP Series of Ultra-low Freezers were specifically designed and engineered for the safe use of hydrocarbon refrigerants R290, and R170. The refrigeration system and overall design were tested and approved by Underwriters Laboratories in accordance to the latest US and Canadian safety standards (UL 61010-1:2010, CSA 22.2 No. 61010-1:2010, UL 471 10th edition, CSA 22.2 No. 120-13).

The US and Canadian standards also call out the US EPA requirements for warning symbols and cautionary text displayed on TSX, TSG, and STP models. These warnings serve to alert shippers, end users and especially service personnel that flammable refrigerants are used in these freezers.

Conclusion

Thermo Fisher Scientific is committed to improving the environmental impact of our ultra-low temperature freezers by using green hydrocarbon (HC) refrigerants.



Thermo Scientific TSX
23 cu. ft. Refrigerator



Thermo Scientific TSX
400 ULT Freezer



Thermo Scientific STP Series
(TDE 600 box) ULT Freezer

Find out more at thermofisher.com/cold

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