



Title:	Unstable Chemicals Guidelines - Research		
Document Type:	Procedure	Document #:	UHT0001499
Program:	Research Facilities	Nov 2014	November 18, 2014
Executive Sponsor:	Vice President, Research and Innovation	Last Reviewed:	February 01, 2021
Owner/Lead:	Director Research Facilities, Research Biosafety Officer Research Facilities	Last Revised:	
Approval Body:	Research Biosafety Committee	Review Cycle:	3 year
Applicable Sites:	☐ Unity Health ☐ Providence ☐ St. Joseph's ☐ St. Michael's		

1.0 PURPOSE

Many chemicals, most notably ethers, are susceptible to decomposition, resulting in the formation of peroxides and are explosive products. Ethers, liquid paraffins and olefins form peroxides on exposure to air and light. Always consult the MSDS sheet of each chemical and follow the manufacturer's recommendation on safe handling of chemicals. A few examples of compounds prone to peroxide formation are: cyclohexene, dimethyl ether, diethyl ether, dioxane, isopropyl ether and tetrahydrofuran (THF).

2.0 POLICY

- All peroxidizable chemicals must be prevented from peroxide formation as much as possible
- Preventative measures include storage in opaque containers and minimizing the rate of decomposition by storing at the lowest possible temperature consistent with the solubility or freezing point of the chemical
- Discard opened container of ether after ½ year or purify the chemical before use Discard unopened container of ether after 1 year or purify the chemical before use Ensure that a schedule is made to check the condition of containers

Version	Approval/Sub-approval body	Approval date
01	Research Biosafety Committee	November 18, 2014
02	Director Research Facilities, Research Biosafety Officer Research Facilities	February 01, 2021
03		

This document is the property of Unity Health Toronto. This material has been prepared solely for internal use. Unity Health Toronto does not accept responsibility for the use of this material by any person or organization not associated with Unity Health Toronto. No part of this document may be reproduced in any form for publication without permission from Unity Health Toronto.