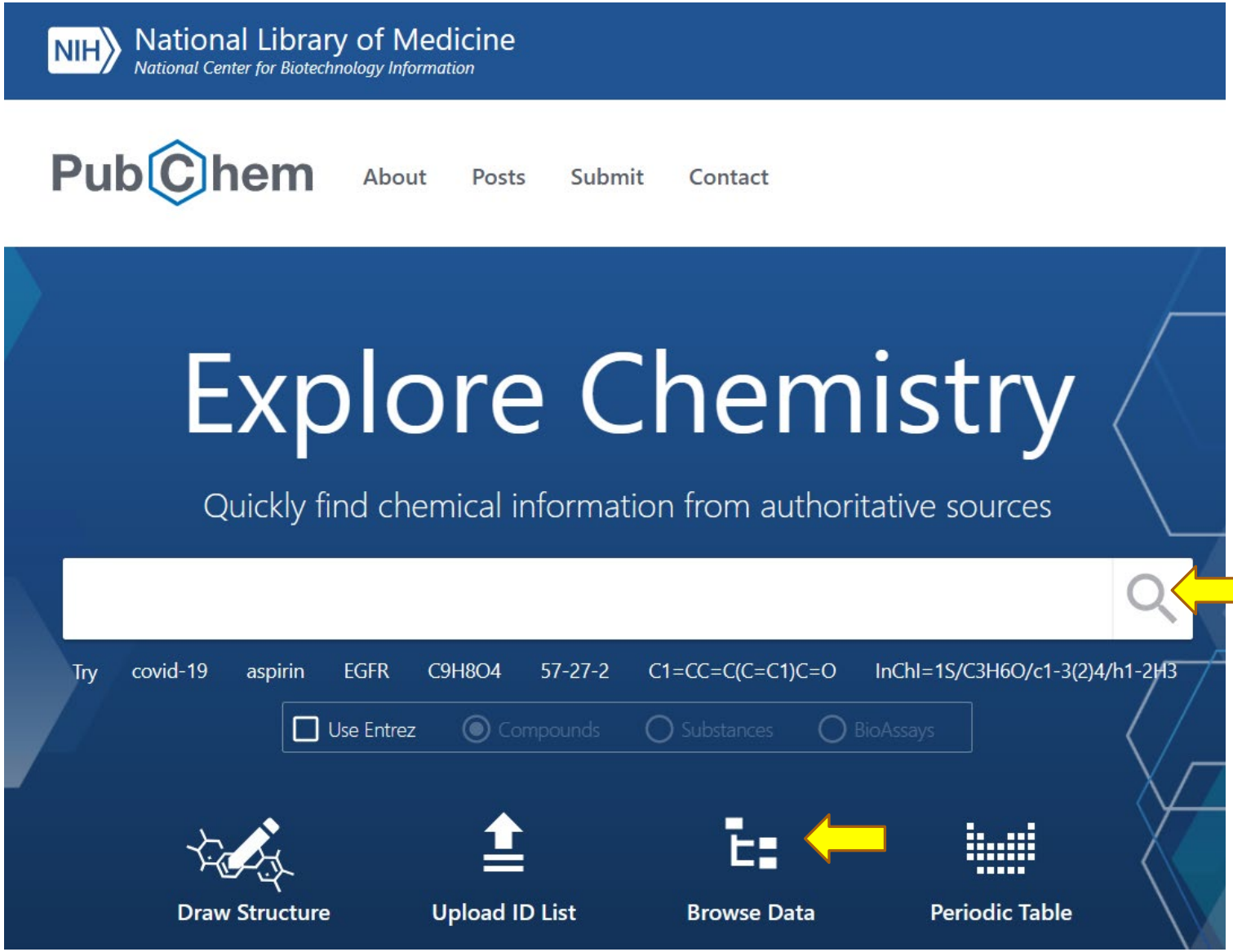
PubChem

OVER 900 DATA SOURCES. INCLUDES LABORATORY CHEMICAL SAFETY SUMMARY SHEETS

SEARCH BY COMPOUND NAME, CAS REGISTRY NUMBER, STRUCTURE, SEQUENCE, TAXONOMIC NAME

HTTPS://PUBCHEM.NCBI.NLM.NIH.GOV/

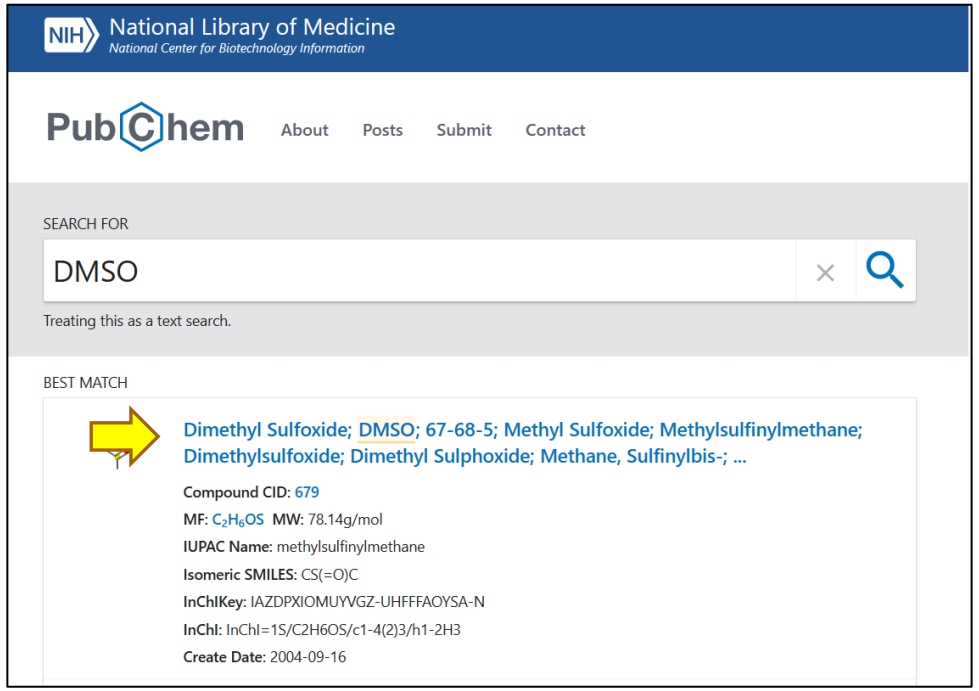


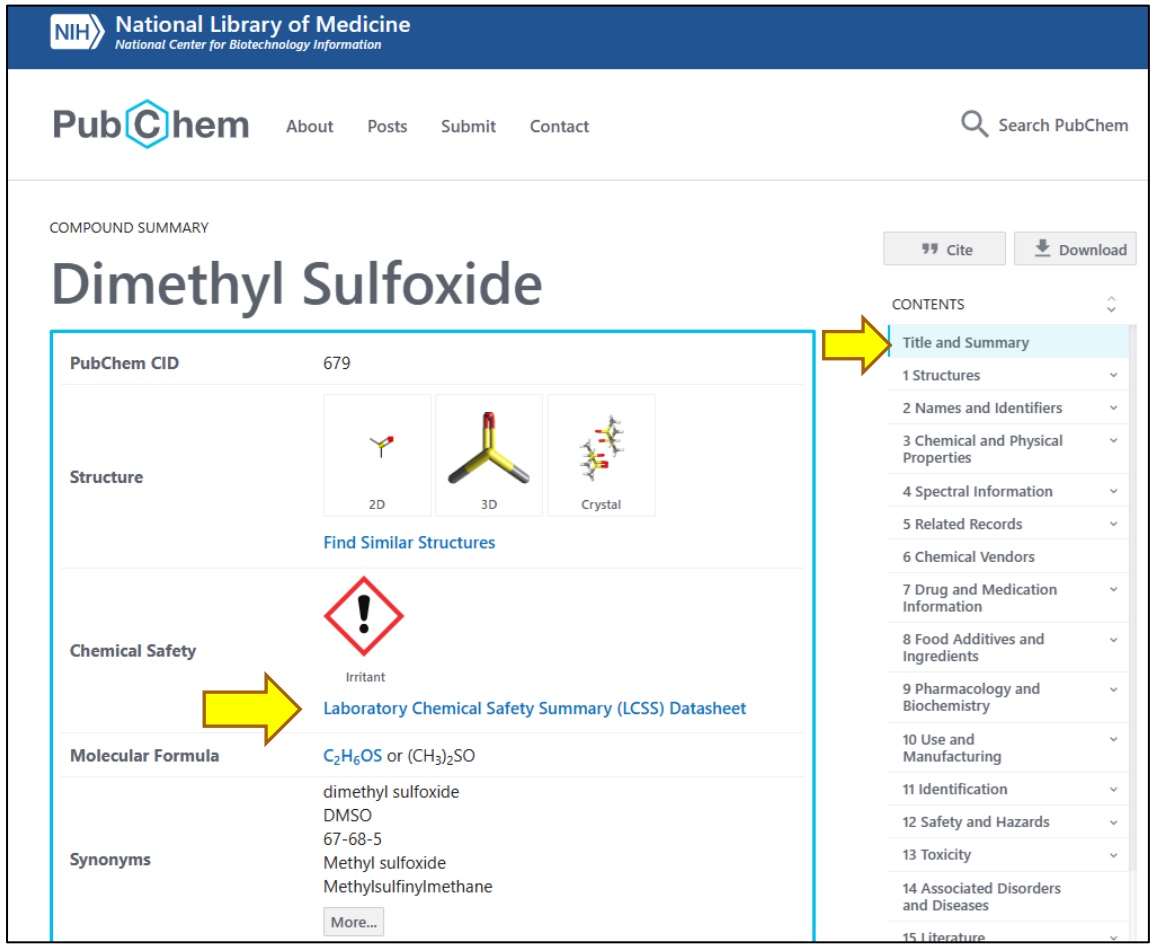
PubChem

Search compounds

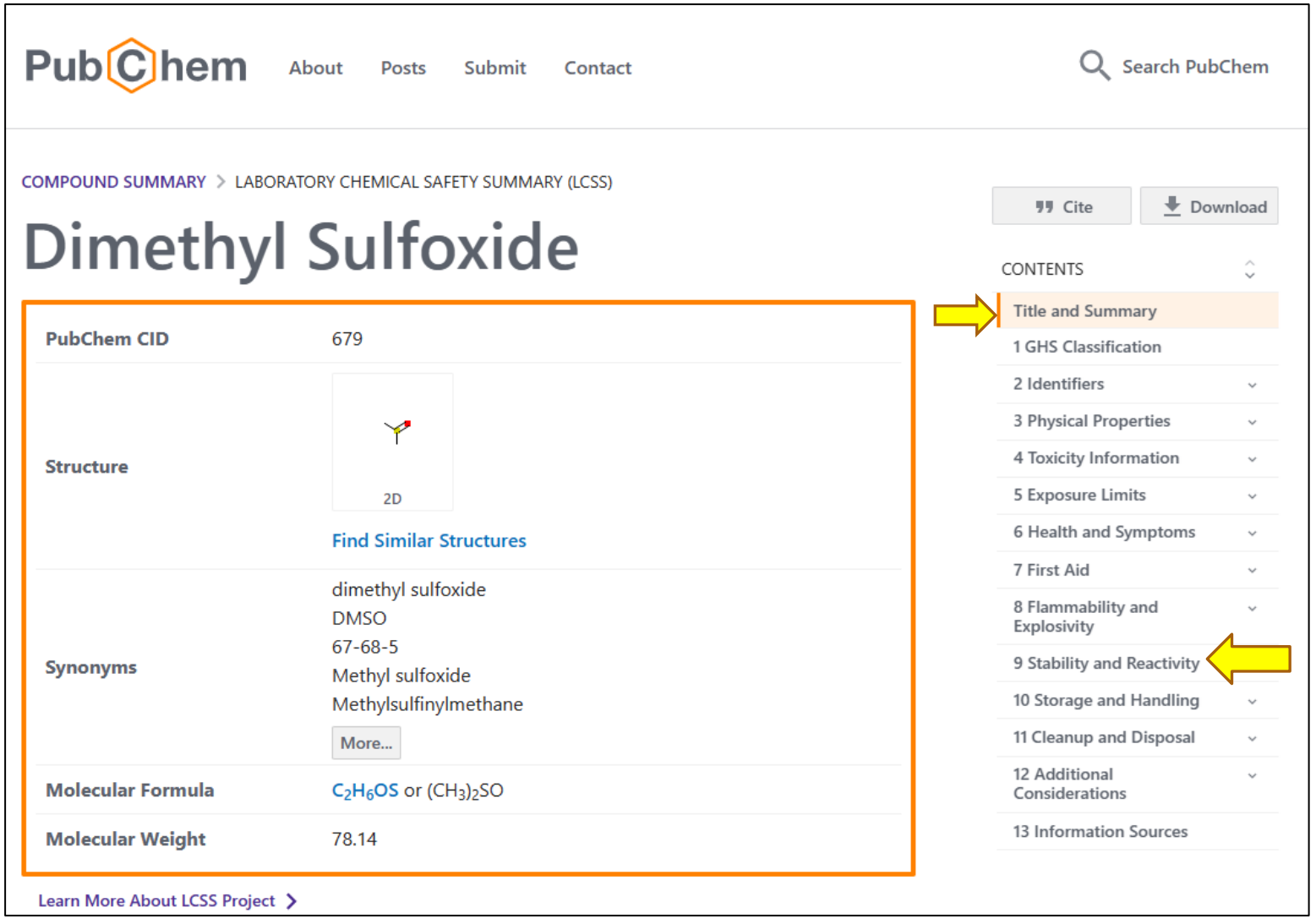
Browse Data to view types of data available (see example below).

Learn more about Data Sources: https://pubchem.ncbi.nlm.nih.gov/docs/data-sources





PubChem Search Results for DMSO



PubChem's Laboratory Chemical Safety Summary (LCSS) for DMSO

PubChem Dimethyl Sulfoxide (Compound)

9 Stability and Reactivity

9.1 Reactivity Profile

DIMETHYL SULFOXIDE decomposes violently on contact with many acyl halides and related compounds such as acetyl chloride, benzenesulfonyl chloride, benzoyl chloride, cyanuric chloride, phosphorus trichloride, phosphorus oxychloride, and thionyl chloride [Chem. Eng. News 35(9):87 (1957)].

▸ CAMEO Chemicals

9.2 Reactivity Alerts

9.2.1 CSL Reaction Information

1 of 5	
CSL No	CSL00002
Reactants/Reagents	DMSO; perchloric acid
Reaction Class	oxidation
GHS Category	Explosive
Reaction Scale	S (up to 1g)
Warning Message	mixture can result in explosion
Source Reference	User-Reported
CSL Status	Approved
Additional Info	Lam et al, JTAC v 85 (2006) I, 25-30
Modified Date	2/27/2018

▸ Pistoia Alliance Chemical Safety Library

▾ CAMEO Chemicals

Source	CAMEO Chemicals
Record Name	DIMETHYL SULFOXIDE
URL	https://cameochemicals.noaa.gov/chemical/8559
Description	CAMEO Chemicals is a chemical database designed for people who are involved in hazardous material incident response and planning. CAMEO Chemicals contains a library with thousands of datasheets containing response-related information and recommendations for hazardous materials that are commonly transported, used, or stored in the United States. CAMEO Chemicals was developed by the National Oceanic and Atmospheric Administration's Office of Response and Restoration in partnership with the Environmental Protection Agency's Office of Emergency Management.
License	CAMEO Chemicals and all other CAMEO products are available at no charge to those organizations and individuals (recipients) responsible for the safe handling of chemicals. However, some of the chemical data itself is subject to the copyright restrictions of the companies or organizations that provided the data. https://cameochemicals.noaa.gov/help/reference/terms_and_conditions.htm?d_f=false

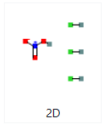
▾ Pistoia Alliance Chemical Safety Library

Source	Pistoia Alliance Chemical Safety Library
Record Name	DMSO; perchloric acid
URL	http://www.pistoiaalliance.org/projects/chemical-safety-library/
Description	The Pistoia Alliance Chemical Safety Library project is dedicated to sharing hazardous reaction safety information across the chemical industries.
License	https://www.cas.org/sites/default/files/documents/chemical-safety-library-terms.pdf

PubChem LCSS for DMSO – Section 9. Stability & Reactivity

PubChem

Aqua regia

PubChem CID	90477010
Structure	 2D
Molecular Formula	$Cl_3H_4NO_3$
Synonyms	AQUA REGIA Nitrohydrochloric acid nitromuriatic acid 8007-56-5 UNII-X3TT5X989E View More...

CONTENTS

PubChem Aqua regia (Compound)

8.1.2 Health Hazards

Excerpt from ERG Guide 157 [Substances - Toxic and/or Corrosive (Non-Combustible / Water-Sensitive)]:

TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns or death. Reaction with water or moist air may release toxic, corrosive or flammable gases. Reaction with water may generate much heat that will increase the concentration of fumes in the air. Fire will produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause environmental contamination. (ERG, 2020)

▸ CAMEO Chemicals

8.1.3 Fire Hazards

Excerpt from ERG Guide 157 [Substances - Toxic and/or Corrosive (Non-Combustible / Water-Sensitive)]:

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. UN1796, UN1802, UN1826, UN2032, UN3084, UN3085, and, at concentrations above 65%, UN2031 may act as oxidizers. Also consult ERG Guide 140. Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Substance may react with water (some violently), releasing corrosive and/or toxic gases and runoff. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated or if contaminated with water. (ERG, 2020)

▸ CAMEO Chemicals

8.1.4 Hazards Summary

Contains nitrosyl chloride and free chlorine; Corrosive; [Merck Index] A strong oxidizing agent with known catalytic activity; Reacts with air; Causes burns; [CAMEO] Causes burns and severe respiratory tract irritation; Highly toxic by ingestion and inhalation; [University of Oxford MSDS] See Nitric acid and Hydrogen chloride.

Merck Index - O'Neil MJ, Heckelman PE, Dobbelaar PH, Roman KJ (eds). The Merck Index, An Encyclopedia of Chemicals, Drugs, and Biologicals, 15th Ed. Cambridge, UK: The Royal Society of Chemistry, 2013.

▸ Haz-Map, Information on Hazardous Chemicals and Occupational Diseases

CAMEO Chemicals

AQUA REGIA

https://cameochemicals.noaa.gov/chemical/4079

Reactivity Profile

AQUA REGIA is a powerful oxidizing agent and a strong acid. Reacts exothermically with chemical bases (for example: amines and inorganic hydroxides) to form salts and water. Reacts with most metals, including gold and platinum, to dissolve them with generation of toxic and/or flammable gases. Can initiate polymerization in polymerizable organic compounds. Reacts with cyanide salts to generate toxic hydrogen cyanide gas. Generates flammable and/or toxic gases with dithiocarbamates, isocyanates, mercaptans, nitrides, nitriles, sulfides, and weak or strong reducing agents. Additional exothermic gas-generating reactions occur with sulfites, nitrites, thiosulfates (to give H2S and SO3), dithionites (SO2), and carbonates (CO2).

Belongs to the Following Reactive Group(s)

- Acids, Strong Oxidizing

PubChem – No LCSS or GHS Codes / Reactivity Profile in CAMEO