

Structure of oxoacids of sulphur:

Various oxo acids of sulphur with their structures are given below

Name	Molecular Formula	Structure
Sulphurous acid	H_2SO_3	$\begin{array}{c} O \\ \\ HO-S-OH \end{array}$
Sulphuric acid	H_2SO_4	$\begin{array}{c} O \\ \\ HO-S-OH \\ \\ O \end{array}$
Thiosulphuric acid	$H_2S_2O_3$	$\begin{array}{c} S \\ \\ HO-S-OH \\ \\ O \end{array}$
Dithionous acid	$H_2S_2O_4$	$\begin{array}{c} O \quad O \\ \quad \\ HO-S-S-OH \end{array}$
Dithionic acid	$H_2S_2O_5$	$\begin{array}{c} O \quad O \\ \quad \\ HO-S-S-OH \\ \\ O \end{array}$

Name	Molecular Formula	Structure
Disulphuric acid or pyrosulphuric acid	$H_2S_2O_7$	$ \begin{array}{c} \text{O} \qquad \text{O} \\ \parallel \quad \parallel \\ \text{HO}-\text{S}-\text{O}-\text{S}-\text{OH} \\ \parallel \quad \parallel \\ \text{O} \qquad \text{O} \end{array} $
Peroxymono sulphuric acid	H_2SO_5	$ \begin{array}{c} \text{O} \\ \parallel \\ \text{HO}-\text{S}-\text{O}-\text{OH} \\ \parallel \\ \text{O} \end{array} $
Peroxodisulphuric acid. Marshall's acid	$H_2S_2O_8$	$ \begin{array}{c} \text{O} \qquad \text{O} \\ \parallel \quad \parallel \\ \text{HO}-\text{S}-\text{O}-\text{O}-\text{S}-\text{OH} \\ \parallel \quad \parallel \\ \text{O} \qquad \text{O} \end{array} $
Dithionic acid	$H_2S_2O_6$	$ \begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ \text{HO}-\text{S}-\text{S}-\text{OH} \\ \parallel \quad \parallel \\ \text{O} \quad \text{O} \end{array} $
Polythionic acid	$H_2S_{n+2}O_6$	$ \begin{array}{c} \text{O} \qquad \text{O} \\ \parallel \quad \parallel \\ \text{HO}-\text{S}-(\text{S})_n-\text{S}-\text{OH} \\ \parallel \quad \parallel \\ \text{O} \qquad \text{O} \end{array} $