Mourite  \( \text{U}^{4+}\text{Mo}^{6+}_5\text{O}_{17} \cdot 5\text{H}_2\text{O} \)

(C)2001-2005 Mineral Data Publishing, version 1

Crystal Data: Monoclinic. Point Group: \( m \) or \( 2/m \). As plates with rectangular outlines, elongated \([010]\), flattened on \(\{100\}\), to 0.5 mm, in fanlike, spherulitic, or veriform aggregates; as nodules and crusts.


Cell Data: Space Group: \( Pa \) or \( P2_1/a \). \(a = 24.420\) \(b = 7.183\) \(c = 9.893\) \(\beta = 102.00^\circ\) \(Z = 4\)

X-ray Powder Pattern: Kyzylsai deposit, Kazakhstan. 5.897 (10), 12.77 (9), 2.871 (8), 1.728 (8), 3.285 (7), 3.193 (7), 3.148 (7)

Chemistry: (1) (2) (3)
\[\begin{array}{lll}
\text{UO}_3 & 2.40 & 2.27 \\
\text{MoO}_3 & 63.67 & 64.47 \\
\text{SiO}_2 & 1.72 & 0.82 \\
\text{TiO}_2 & 0.06 & 0.08 \\
\text{UO}_2 & 19.38 & 21.65 \\
\text{Al}_2\text{O}_3 & 1.36 & 0.21 \\
\text{Fe}_2\text{O}_3 & 0.57 & 0.05 \\
\text{Tl}_2\text{O}_3 & 0.23 & \\
\text{PbO} & 0.09 & 0.00
\end{array}\]

(1) Kyzylsai deposit, Kazakhstan; original total given as 100.52%. (2) Do. (3) \( \text{UMo}_5\text{O}_{17} \cdot 5\text{H}_2\text{O} \).

Occurrence: In the oxidized zone of a U–Mo deposit (Kyzylsai deposit, Kazakhstan); in a sandstone-hosted uranium deposit (Boso-Hackney prospect, Texas, USA).

Association: Uraninite, molybdenite, jordisite, ilsemannite, pyrite, umohoite, sedovite, iriginite, powellite, sodium uranospinite, uranophane, tyuyamunite, goethite, jarosite, kaolinite (Kyzylsai deposit, Kazakhstan); pyrite, marcasite, “opal,” chalcedony (Boso-Hackney prospect, Texas, USA).

Distribution: From the Kyzylsai Mo–U deposit, Chu-Ili Mountains, southwestern Balkhash region, Kazakhstan. At the Boso-Hackney prospect, about 19 km southwest of Falls City, Karnes Co., Texas, USA.

Name: For MOlybdenum and URanium in the composition.

Type Material: Mining Institute, St. Petersburg, 999/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 65196, 67299; National Museum of Natural History, Washington, D.C., USA, 127972.


All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of Mineral Data Publishing.