Bertossaite \((\text{Li,Na})_2\text{CaAl}_4(\text{PO}_4)_4(\text{OH, F})_4\)

©2001-2005 Mineral Data Publishing, version 1

**Crystal Data:** Orthorhombic. **Point Group:** 2/m 2/m 2/m. Massive.

**Physical Properties:** Cleavage: On \{100\}, good. Fracture: Uneven to subconchoidal. Hardness = 6 D(meas.) = 3.10 D(calc.) = 3.10

**Optical Properties:** Semitransparent. Color: Pale pink; colorless in transmitted light. Luster: Vitreous. Optical Class: Biaxial (-). Orientation: X = a; Y = c; Z = b. Dispersion: \(r < v\), moderately strong. \(\alpha = 1.624(3)\) \(\beta = 1.636(3)\) \(\gamma = 1.642(3)\) 2V(meas.) = Moderately large. 2V(calc.) = 53°

**Cell Data:** Space Group: Im\(\text{m}\). \(a = 11.48(1)\) \(b = 15.73(2)\) \(c = 7.23(1)\) \(Z = 4\)

**X-ray Powder Pattern:** Buranga pegmatite, Rwanda. (ICDD 41-1450). 3.059 (100), 3.104(84), 2.411 (63), 3.295 (60), 2.881 (57), 2.577 (40), 4.32 (33)

**Chemistry:** (1) Buranga pegmatite, Rwanda; an analysis was not published - based on other properties it is stated to be the calcium analog of palermoite, \((\text{Sr, Ca})(\text{Li, Na})_2\text{Al}_4(\text{PO}_4)_4(\text{OH})_4\).

**Occurrence:** Thought to be formed during a late calcium-rich phase of mineralization in a lithium-bearing granite pegmatite.

**Association:** Amblygonite, lazulite-scorzalite, angelite, brazilianite, apatite, crandallite, trolleite, samuelsonite, quartz.

**Distribution:** In the Buranga pegmatite, near Gatumba, Rwanda.

**Name:** Honoring Antonio Bertossa, Director of the Geological Survey of Rwanda.

**Type Material:** Royal Museum of Central Africa, Tervuren, Belgium, RMB11232; National Museum of Natural History, Washington, D.C., USA, 141000.

**References:** (1) von Knorring, O. and M.E. Mrose (1966) Bertossaite, \((\text{Li, Na})_2(\text{Ca, Fe, Mn})\text{Al}_4(\text{PO}_4)_4(\text{OH, F})_4\), a new mineral from Rwanda, Africa. Can. Mineral., 8, 668 (abs.). (2) (1967) Amer. Mineral., 52, 1583 (abs. ref. 1).

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.