

## 'Coutinite', 'coutinhite' and 'neodymite' discredited as identical to lanthanite-(La) and/or lanthanite-(Nd)

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### ABSTRACT

The names 'coutinite' [= lanthanite-(Nd)], 'coutinhite' [= lanthanite-(La)], and 'neodymite' [= lanthanite-(Nd) or lanthanite-(La)], do not follow the rules of nomenclature for rare earth minerals. These names were introduced without International Mineralogical Association (IMA) approval and are now formally discarded (Nomenclature Proposal 98-B) by the Commission on New Minerals and Mineral Names (CNMMN) of the IMA.

**KEYWORDS:** lanthanite-(La), lanthanite-(Nd), coutinite, coutinhite, neodymite, Curitiba, Brazil.

THREE occurrences of Ce-poor lanthanite-group minerals are known from southern Brazil. The first is located in the city of Curitiba (Paraná State) and in the neighbouring region, where several outcrops have been found in the sediments of the Guabirotuba Formation of the Curitiba Basin (Coutinho, 1955; Ansell *et al.*, 1976; Cesbron *et al.*, 1979; Roberts *et al.*, 1980; Svisero and Mascarenhas, 1981; Fujimori, 1981; Trescases *et al.*, 1986; Trescases and Fortin, 1988; Fortin, 1989; Formoso *et al.*, 1989). The name lanthanite-(Nd) was applied for the first time by Roberts *et al.* (1980) with IMA approval. Svisero and Mascarenhas (1981) and Fujimori (1981), being unaware of the paper by Roberts *et al.* (1980), also described the mineral from Curitiba. Without IMA approval Svisero and Mascarenhas (1981) applied the names 'coutinhite' and 'neodymite' for a mineral which corresponds to lanthanite-(La), while Fujimori (1981) applied the names 'coutinite' and 'neodymite' for a mineral which corresponds to lanthanite-(Nd). Optical, chemical and X-ray powder diffraction data obtained for 'coutinhite', 'coutinite', lanthanite-(La) and lanthanite-(Nd), compiled by Coimbra *et al.* (1989) and Atencio *et al.* (1989), are in good agreement. The names 'coutinite', 'coutinhite' and 'neodymite' do not follow the rules of nomenclature for rare earth minerals and a nomenclature proposal (98-B),

approved by the CNMMN of the IMA, formally discarded these names.

The second occurrence, in a single outcrop, was found in the sediments of the Resende Formation (Taubaté Basin) in the locality of Santa Isabel, São Paulo State (Coimbra *et al.*, 1989). A third occurrence (Waber, 1990) has been discovered in the Morro do Ferro (Poços de Caldas, Minas Gerais).

Following the nomenclature system for rare earth minerals by Bayliss and Levinson (1988), the Curitiba mineral is classified as lanthanite-(Nd) or lanthanite-(La), while the Santa Isabel mineral is lanthanite-(La). Nevertheless, all eight of the chemical analyses for the Curitiba mineral and one for the Santa Isabel sample have a Nd:La ratio of ~1:1. In reality, in each crystal there are points that correspond to lanthanite-(La) and others to lanthanite-(Nd). No quantitative chemical data are available for the Poços de Caldas lanthanite. However, an energy dispersive spectrum obtained by Waber (1990) suggests a Nd:La ratio similar to that for the Curitiba and Santa Isabel minerals. Two other lanthanite-(Nd) and five lanthanite-(Ce) occurrences were reported in the literature. No other lanthanite-(La) occurrence is currently known.

The first published analyses for lanthanite-(La) were given in the ICDD card 30-678 for a mineral

from Curitiba, Paraná. According to H.G. Ansell (pers. comm., 1996), analyses yielding the La-rich material were carried out on the three samples mentioned by Ansell *et al.* (1976) (NMC 12213, NMC 12214 and NMC 12215), and these samples which are stored at the Geological Survey of Canada are the type specimens for lanthanite-(Nd).

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