

Ag-Bi-Tellurides from Kudremukh BIF, Karnataka

Electron Microprobe studies on BIF from Kudremukh area have indicated the presence of Ag-Bi- and Pb-Tellurides in association with other sulphides.

Ag-Bi- and Pb-telluride comparable to TAPALPITE and ALTAITE (refer Table I for EPMA data) respectively, have been tentatively identified in the course of electron microprobe investigation on core samples of Kudremukh BIF. The tellurides preferentially occur in BIF containing relatively high proportion of sulphides viz., chalcopyrite and pyrrhotite. They are found as tiny drops and speck-like inclusions in the silicates but in close vicinity of sulphides. The identification of tellurides required 10,000 to 15,000 times magnification. They are characterized by a distinctly higher reflectivity than the associated sulphides. This is the first report of tellurides from BIF of this area.

Table I. Chemical analyses of Ag-Bi- and Pb-tellurides and the associated sulphides of Kudremukh Iron-Formation.

	Ag-Bi ¹ Telluride	Pb ¹ Telluride	Chalcopyrite ²	Pyrrhotite ³
Fe	2.03	-	30.45	60.23
Ag	24.42	-	-	-
Te	37.05	36.66	-	-
Pb	-	63.34	-	-
Cu	-	-	33.46	-
Bi	32.80	-	-	-
S	0.55	-	33.46	38.65
Total	96.85	100.00	97.37	98.88

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| 1. Average of three analyses
2. Average of two analyses
3. Average of three analyses | } Analysed at the Dept. of Electron
optics, University of Oulu, using JEOL-JCXA
733 Superprobe. |
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The identified occurrence of tellurides should assume significance in the light of recent report of gold in the siliceous tailings of Kudremukh iron ore. A more detailed probing of Kudremukh BIF for precious and rare metals is warranted. Further work is in progress.

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