SHRIMP zircon U-Pb ages of acidic tuff layers within the Ishikari and Kushiro coal basins, in Hokkaido, Japan

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SHRIMP zircon U-Pb ages were obtained for acidic tuff layers within the Ishikari and Kushiro coal basins, in Hokkaido, Japan to understand timings of the coal formations. The sample from the Ishikari coal basin was taken from an open pit of the Sanbi Coal Mine, Bibai city. It is collected from the thin layer of white tuff in the No. 4 coal bed of the mine. The coal bed and the acidic tuff layer is members of the Bibai Formation. The sample from the Kushiro coal basin was taken from underground of the Kushiro Coal Mine. The coal bed is present in the Harutori Formation of the Urahoro Group. Analytical results show that age of the acidic tuff within the coal bed in the Bibai Formation is 43.52 ±0.41 Ma. The age of the acidic tuff in the coal bed of the Harutori Formation in Kushiro basin is 39.54 ±0.56 Ma. Katagiri et al. (2015) obtained 39.87 ±0.35 Ma from an acidic tuff in the Urahoro Group. Our result is slightly younger than the result of Katagiri et al. (2015), however those ages are identical within the analytical uncertainty. Present results show that the deposition of the coal bed in the Ishikari basin is 4 million years older than that in the Kushiro basin.


Keywords: Ishikari Coal Basin, Kushiro Coal Basin, SHRIMP zircon U-Pb age