



Aciniform Black Carbon at the K-T boundary

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Aciniform Black Carbon (ABC) is a morphologically based definition for 10 – 100 nm diameter spherules (grapes) that are welded into characteristic chains and aggregates (grape-bunches). Unlike operationally defined black carbon fractions isolated from sediments, ABC is known to form exclusively from carbon combustion and provides an unambiguous sedimentary record of biomass and fossil fuel burning. ABC was previously identified in Cretaceous-Tertiary (K-T) boundary sediments using a chemical pre-treatment followed by Scanning Electron Microscopy (SEM). The K-T boundary ABC was attributed to global scale wildfires ignited by meteorite impact. Here, the presence of ABC in K-T boundary sediments from New Zealand and Spain is confirmed using a less labor-intensive chemical pre-treatment followed by SEM.