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# Mineralogy and Genesis of the Wealdian Sediments in the Southern Cordillera Iberica (Spain)

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**Abstract:** The present paper presents the mineralogical composition of sediments from the Spanish Wealdian facies, selected from four stratigraphic sections of several regions in the Southern Cordillera Iberica.

Three of these sections show an irregular alternation of kaolinite rich sandy and silty-clay beds. The fourth section which contains calcareous layers, is very important from a geological point of view, because it is located where the structures of two ranges, the Iberian and the Betics, converge.

The clays of about 80 samples from these sections always consist of illite, kaolinite and interstratified clay minerals. The sandy layers also contain quartz, as well as potash and calcic-sodic feldspars. The fine fraction ( $< 2 \mu\text{m}$ ) is composed of kaolinite, between pM and T types, swelling illite and randomly interstratified clay minerals of the type  $(10_{\text{I}}-14_{\text{M}})$ , richer in  $10 \text{ \AA}$  layers.

From the mineralogical and crystalchemical data and field observations, it is deduced that these sediments are mainly detrital. This and the layer alternation suggest, for the Upper Jurassic and Lower Cretaceous (Wealdian facies), a climate alternating from biostatic to rhexistatic. Alternating laterization and erosion might supply the materials to the Wealdian sedimentary basin.

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