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Mineral compositions in genetic horizons soils derived from loess-like deposit at the carpathian foothills

T. Zaleski (1), Mariusz Klimek (2), MichaŁ Skiba (3), Ryszard Mazurek (1)

(1) Department of Soil Science and Soil Protection, Agriculture University of Cracow

(2) Institute of Geograohy and Spatial Management, Jagiellonian University, Cracow

(3) Institute of Geological Sciences, Jagiellonian University, Cracow

(e-mail: rrtzales@cyf-kr.edu.pl, tel: +48 12 6624370)

The main aim of this research was evaluation of mineral compositions in genetic horizons soils of derived from loess-like deposit at the edge zone of Carpathian Foothils.

Carpathian silt deposits, now definited most often as loess-like and they are called also "Carpathian variety of loess".Large micromorphological studies on the lessivage process in soils derived from loess-like covers of the Wieliczka Foothills proved that the lessivage is the main soil forming process on these areas. As the result of this process is the differentiation of the texture and mineral composition in soil genetic horizons effecting water-air properties in the whole soil profile of lessives soils. Lessives soils of the Carpathian Foothills characterize a significant accumulation of the illuvial clay in Bt horizons and a deep illuviation reaching the depth of about 3 m. Skiba et alreport that in the composition of silt soil cover of the Wieliczka Foothills lessives soils Albeluvisols and lessives soils strongly gleyed from above Stagnic Luvisols, and also lessives soils eroded Cambic Luvisols occupy about 80% of the surface.

Soil represented genetic horizons soils were selected to the investigations. In this soils made mineral total composition end compositied on of colloidal clay fraction evaluated (with grains diameter $<$0,002 mm) basing on rentgenographic analysis using a diffractometer PHILIPS X'Pert ADP (with a generator PW 1870 and a vertical goniometer PW 3020).

The result of this investigations presented in table 1.

Table 1. Mineral composition of fraction $< 2\mu$m diameter in genesis horizons of investigation soil

Profile Nr, location	horizon	minerals
1 Zakliczyn	A	quartz, mica (muscovite, illite), kaolinite
	Eet	quartz , kaolinite, mica (muscovite, illite)
	Bt	quartz, kaolinite, mica (muscovite, illite), smektit, ilit/smektit
	BtC1	kaolinite, mica (muscovite, illite), quartz
	BtC2	mica (muscovite, illite), quartz,
2 Zablocie	A	quartz, kaolinite, mica (muscovite, illite)
	Eetg	quartz, kaolinit mica (muscovite, illite)
	Bt1	kaolinit, mica (muscovite, illite), quartz
	Bt2	mica (muscovite, illite), smektyt, ilit/ smektite, kaolinit, quartz
	BtC2	mica (muscovite, illite), smekite, ilite/ smektite, kaolinite, quartz