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ABSTRACT - *Fluctuations of copper, iron and zinc throughout Parmigiano-Reggiano cheesemaking.* – 20 different Parmigiano-Reggiano cheese makings were followed in two different dairies. For each cheese making samples of milk, natural whey starter, rennet and, after coagulation, curd and cooked whey were taken. The samples after humid digestion microwave assisted were analysed by means of ICP-AES in order to determine their copper, iron and zinc concentrations. Zinc concentrations in milk are high (mean 15,7mg/l). Zinc concentrates mostly in curd (more than 90%) while iron shows an opposite behaviour (81% in whey). Regarding copper it has been demonstrated that 0,9±0,3 g of the element are transferred from the vat (made of copper) to the whey-curd complex at each cheesemaking. Copper shows a behaviour which is intermediate between zinc and iron since it was found almost equally in curd and whey. In any case the final copper and zinc concentrations in curd (mean 9,14 mg/kg and 55,7 respectively) do not raise concerns for consumers' health even considering a concentration of the element during the ripening of the cheese.