19. An Investigation of the Fused Electrolytic Baths of Cerium Chloride

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Thermal analysis was carried out for binary and ternary mixtures of salts cerium chloride (RC13), CaCl₂, BaCl₂, and NaCl. The cerium group chloride (RC13) used here contains 89% of cerous chloride and 11% of the chlorides of other cerium group metals. The melting point of RC13 is 796°C. The binary eutectic points are 78 mol.% of CaCl₂ at 613°C in the system of RC13-CaCl₂, 31% mol. of BaCl₂ at 683°C in the system RC13-BaCl₂ and 54 mol.% of NaCl at 499°C in the system of RC13-NaCl.

The ternary eutectic points are 30 mol.% of RC13, 49 mol.% of CaCl₂, 21 mol.% of BaCl₂ at 490°C in the system of RC13-CaCl₂-BaCl₂ 48 mol.% of CaCl₂, 31 mol.% of NaCl at 459°C in the system of RC13-CaCl₂-NaCl and 36 mol.% of RC13, 42 mol.% of NaCl, 22 mol.% of BaCl₂ at 373°C in the system of RC13-NaCl-BaCl₂.

20. Studies on the Turnover of Phosphorus in Some Tissues with the Use of Radioactive Phosphorus P³².*

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Radiophosphorus P³² in the form of phosphate (Na₂HPO₄+NaH₂PO₄) solution (pH 7.3-7.4) was injected into male mice subcutaneously, and the content and specific activity of P³² in the live tissue was examined. The radiophosphorus with the activity of 0.5-5.0 μc was injected to each mouse weighing about 20 grams. The animals were divided into four groups; (a) control, (b) with the experimental liver damage, (c) with methionine treated, and (d) with liver damage and methionine treatment (Table 1). The liver damage was done by the subcutaneous injection of carbon tetrachloride 24 hours before the P³² injection. The methionine treatment was performed by the subcutaneous injection of 40 mg 1-methionine to each mouse simultaneous with P³² administration. The animals were sacrificed three and five hours respectively after the P³² administration, and P³² content of the acid soluble, the lipid, and the residual fraction of the liver homogenate was measured by the G-M counter. The radiosphorus content of various fractions was as follows (Table 1).