

**261. Purification of NiCO<sub>3</sub>**

By Hermes, Albert; Schulze, Herbert; Vogt, Carl

From [No Corporate Source data available \(1943\)](#), DE 742426 19431014, Language: Unavailable, Database: CAPLUS

To remove sulfate S, Ca, and Mg from crude NiCO<sub>3</sub>, the latter is heated with alkali salts at over 700° and is then leached.

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**262. The heat of formation of several mineral carbonates**

By Roth, W. A.

From [Journal fuer Praktische Chemie \(Leipzig\) \(1941\)](#), 158, 117-24. Language: Unavailable, Database: CAPLUS

cf. C. A. 35, 5382.9. Based on the heat of soln. of carbonate and oxide in HNO<sub>3</sub> soln., the heat of formation of PbCO<sub>3</sub> (cerussite) from yellow PbO and gaseous CO<sub>2</sub> at const. pressure and about 20° is +18.91 ± 0.11 kg.-cal./mol.; that of BaCO<sub>3</sub> (witherite) is +61 kg.-cal./mol. (Low precision is due to the discrepancy in literature values for the heat of soln. of BaO in acid and to the difficulty of obtaining pure BaO.) Magnesite (MgCO<sub>3</sub>) was placed in a small cellophane crucible (in a calorimetric bomb) connected to paraffin oil by a cotton thread so that when the cellophane burned, the MgCO<sub>3</sub> fell through the paraffin oil flame and the MgO was collected in a quartz dish; after the usual corrections were made, the heat of formation of MgCO<sub>3</sub> from MgO and CO<sub>2</sub> was calcd. as +22.6 ± 0.5 kg.-cal./mol. for const. pressure and about 20°. In general, the following are considered the most reliable values for heat liberated (kg.-cal./mol.) in the reaction MO + CO<sub>2</sub> → MCO<sub>3</sub> at 20° and const. pressure (where M is a metal): Cu +7 to 10 (malachite +13.8, azurite +20.9); Mg +23; Ca (calcite) +42.5 (aragonite only slightly higher); Sr +55 (uncertain); Ba +61; Zn +16.9; Cd +19 (uncertain); Pb +18.9; Mn +15 (to be checked); Fe +16 (to be checked); Co +17 to 20; Ni approx. +10.

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**264. Preparation of normal nickel carbonate according to Senarmont and the formation of solid solutions of nickel chloride in nickel carbonate**

By Krustinsons, J.

From [Zeitschrift fuer Anorganische und Allgemeine Chemie \(1933\)](#), 212, 45-8. Language: Unavailable, Database: CAPLUS

Prepn. of NiCO<sub>3</sub> by heating a soln. of NiCl<sub>2</sub> and CaCO<sub>3</sub> at 160° [Senarmont, Ann. chim. phys. [3], 30, 138(1850)] gives m NiCl<sub>2</sub>.nNiCO<sub>3</sub> in which the ratios of m and n vary from 1:2.11 to 1:2.97. This is a solid soln. of NiCl<sub>2</sub> in NiCO<sub>3</sub> and shows no spectrum of NiCl<sub>2</sub>. The more concd. the NiCl<sub>2</sub> soln. the greater the Cl concn. in the final product. Pure CoCO<sub>3</sub> is formed by the above procedure.

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**266. Conversion of nickel carbonyl into carbonate in toluene solution**

By Thorne, P. C. L.

From [Journal of the Chemical Society, Transactions \(1924\)](#), 125, 1967-8. Language: Unavailable, Database: CAPLUS

When solns. of Ni carbonyl in toluene are exposed to even small amts. of air a gelatinous, green ppt. is formed. Anal. of the air-dried product indicated a basic Ni carbonate and not a compd. of carbonyl and hydroxide as suggested by Lenher and Loose (J. Am. Chem. Soc. 22, 114 (1900)).

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**267. Solubility of nickel in water containing carbonic acid**

By Robl, R.

From [Angewandte Chemie \(1924\)](#), 37, 938-9. Language: Unavailable, Database: CAPLUS

In distd. water satd. with CO<sub>2</sub> 16.3 g. Ni foil (Ni 99.0%, Fe 0.8%, Cu 0.4%) lost 0.0546 g. in 13 days. Hydrated NiCO<sub>3</sub> was qual. identified. In ordinary distd. water 15.3 g. lost 0.002 g. in 20 days and 11.3 g. lost 0.0017 g. in 14 days. No loss at all could be detected in 14 days in water freed from CO<sub>2</sub> and protected from atm. CO<sub>2</sub>. As Ni salts are toxic these expts. are of significance in connection with the use of cooking utensils of Ni.

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