

## SECTION C –CHEMISTRY; METALLURGY

**C01 INORGANIC CHEMISTRY** (processing powders of inorganic compounds preparatory to the manufacturing of ceramic products C04B 35/00; fermentation or enzyme-using processes for the preparation of elements or inorganic compounds except carbon dioxide C12P 3/00; obtaining metal compounds from mixtures, e.g. ores, which are intermediate compounds in a metallurgical process for obtaining a free metal C21B, C22B; production of non-metallic elements or inorganic compounds by electrolysis or electrophoresis C25B)

**C01D COMPOUNDS OF ALKALI METALS, I.E. LITHIUM, SODIUM, POTASSIUM, RUBIDIUM, CAESIUM, OR FRANCIUM** (metal hydrides C01B 6/00; salts of oxyacids of halogens C01B 11/00; peroxides, salts of peroxyacids C01B 15/00; sulfides or polysulfides C01B 17/22; thiosulfates, dithionites, polythionates C01B 17/64; compounds containing selenium or tellurium C01B 19/00; binary compounds of nitrogen with metals C01B 21/06; azides C01B 21/08; metal amides C01B 21/092; nitrites C01B 21/50; phosphides C01B 25/08; salts of oxyacids of phosphorus C01B 25/16; carbides C01B 31/30; compounds containing silicon C01B 33/00; compounds containing boron C01B 35/00; cyanides C01C 3/08; salts of cyanic acid C01C 3/14; salts of cyanamide C01C 3/16; thiocyanates C01C 3/20)

- (1) Attention is drawn to Note (1) after class C01, which defines the last place priority rule applied in this class, i.e. in the range of subclasses C01B C01G and within these subclasses. [8]  
 (2) Therapeutic activity of compounds is further classified in subclass A61P. [7]

|             |                                                                                         |             |                                                                                                              |
|-------------|-----------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|
| <b>1/00</b> | <b>Oxides or hydroxides of sodium, potassium, or alkali metals in general [2]</b>       | 3/24        | . . Influencing the crystallisation process                                                                  |
| 1/02        | . Oxides                                                                                | 3/26        | . Preventing the absorption of moisture or caking of the crystals                                            |
| 1/04        | . Hydroxides                                                                            |             |                                                                                                              |
| 1/20        | . . Preparation by reacting oxides or hydroxides with alkali metal salts                | <b>5/00</b> | <b>Sulfates or sulfites of sodium, potassium, or alkali metals in general [2]</b>                            |
| 1/22        | . . . with carbonates or bicarbonates                                                   | 5/02        | . Preparation of sulfates from alkali metal salts and sulfuric acid or bisulfates; Preparation of bisulfates |
| 1/24        | . . . from or <u>via</u> fluorides or silico-fluorides                                  | 5/04        | . Preparation of sulfates with the aid of sulfurous acid or sulfites, e.g. Hargreaves process                |
| 1/26        | . . Preparation from or <u>via</u> cyano compounds, e.g. cyanides, cyanamides           | 5/06        | . Preparation of sulfates by double decomposition                                                            |
| 1/28        | . . Purification; Separation                                                            | 5/08        | . . with each other or with ammonium sulfate                                                                 |
| 1/30        | . . . by crystallisation                                                                | 5/10        | . . with sulfates of magnesium, calcium, strontium, or barium                                                |
| 1/32        | . . . by adsorption or precipitation                                                    | 5/12        | . Preparation of double sulfates of magnesium with sodium or potassium [2]                                   |
| 1/34        | . . . with selective solvents                                                           | 5/14        | . Preparation of sulfites (C01D 5/04 takes precedence)                                                       |
| 1/36        | . . . by oxidation                                                                      | 5/16        | . Purification                                                                                               |
| 1/38        | . . . by dialysis                                                                       | 5/18        | . Dehydration                                                                                                |
| 1/40        | . . . by electrolysis                                                                   |             |                                                                                                              |
| 1/42        | . . Concentration; Dehydration                                                          | <b>7/00</b> | <b>Carbonates of sodium, potassium, or alkali metals in general [2]</b>                                      |
| 1/44        | . . Preparation in the form of granules, pieces, or other shaped products               | 7/02        | . Preparation by double decomposition                                                                        |
| <b>3/00</b> | <b>Halides of sodium, potassium, or alkali metals in general [2]</b>                    | 7/04        | . . with a fluoride or silico-fluoride (C01D 1/24 takes precedence)                                          |
| 3/02        | . Fluorides                                                                             | 7/06        | . Preparation <u>via</u> sodium or potassium magnesium carbonate                                             |
| 3/04        | . Chlorides                                                                             | 7/07        | . Preparation from the hydroxides [2]                                                                        |
| 3/06        | . . Preparation by working up brines, seawater or spent lyes                            | 7/08        | . Preparation from or <u>via</u> cyano compounds of sodium or potassium (C01D 1/26 takes precedence)         |
| 3/08        | . . Preparation by working up natural or industrial salt mixtures or siliceous minerals | 7/10        | . Preparation of bicarbonates from carbonates (ammonia-soda process C01D 7/18)                               |
| 3/10        | . Bromides                                                                              | 7/12        | . Preparation of carbonates from bicarbonates                                                                |
| 3/12        | . Iodides                                                                               | 7/14        | . Preparation of sesquicarbonates                                                                            |
| 3/14        | . Purification                                                                          | 7/16        | . Preparation from compounds of sodium or potassium with amines and carbon dioxide                           |
| 3/16        | . . by precipitation or adsorption                                                      | 7/18        | . Preparation by the ammonia-soda process                                                                    |
| 3/18        | . . with selective solvents                                                             | 7/22        | . Purification                                                                                               |
| 3/20        | . . by melting                                                                          |             |                                                                                                              |
| 3/22        | . Preparation in the form of granules, pieces, or other shaped products                 |             |                                                                                                              |

## C01D

- 7/24 . . Crystallisation
- 7/26 . . by precipitation or adsorption
- 7/28 . . with selective solvents
- 7/30 . . by oxidation
- 7/32 . . by dialysis
- 7/34 . . by electrolysis
- 7/35 . Varying the content of water of crystallisation or the specific gravity [2]
- 7/37 . . Densifying sodium carbonate [2]
- 7/38 . Preparation in the form of granules, pieces, or other shaped products
- 7/40 . . Influencing the crystallisation process
- 7/42 . Preventing the absorption of moisture or caking

### **9/00 Nitrates of sodium, potassium, or alkali metals in general [2]**

- 9/02 . Preparation by working-up natural salt mixtures
- 9/04 . Preparation with liquid nitric acid
- 9/06 . Preparation with gaseous nitric acid or nitrogen oxides

- 9/08 . Preparation by double decomposition
- 9/10 . . with ammonium nitrate
- 9/12 . . with nitrates of magnesium, calcium, strontium, or barium
- 9/14 . . of salts of potassium with sodium nitrate
- 9/16 . Purification
- 9/18 . Preparation in the form of shaped products, e.g. granules
- 9/20 . Preventing the absorption of moisture or caking

### **13/00 Compounds of sodium or potassium not provided for elsewhere [2]**

#### **15/00 Lithium compounds [2]**

- 15/02 . Oxides; Hydroxides [2]
- 15/04 . Halides [2]
- 15/06 . Sulfates; Sulfites [2]
- 15/08 . Carbonates; Bicarbonates [2]
- 15/10 . Nitrates [2]

#### **17/00 Rubidium, caesium, or francium compounds [2]**