

CPC**COOPERATIVE PATENT CLASSIFICATION****C01D**

COMPOUNDS OF ALKALI METALS, i.e. LITHIUM, SODIUM, POTASSIUM, RUBIDIUM, CAESIUM, OR FRANCIUM ([metal hydrides {monoborane, diborane or addition complexes thereof} C01B 6/00](#); [salts of oxyacids of halogens C01B 11/00](#); [peroxides, salts of peroxyacids C01B 15/00](#); [sulfides 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](#); [{compounds other than ammonia and cyanogen, containing nitrogen and other non-metals C01B 21/082}](#); [metal amides C01B 21/092](#); [nitrites C01B 21/50](#); [phosphides C01B 21/50](#); [{compounds of noble gases C01B 23/0005}](#); [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](#))

C01D 1/00**Oxides or hydroxides of sodium, potassium or alkali metals in general**

C01D 1/02

. Oxides

C01D 1/04

. Hydroxides

C01D 1/20

. . Preparation by reacting oxides or hydroxides with alkali metal salts

C01D 1/22

. . . with carbonates or bicarbonates

C01D 1/24

. . . from or via fluorides or silico-fluorides

C01D 1/26

. . Preparation from or via cyano compounds, e.g. cyanides, cyanamides

C01D 1/28

. . Purification; Separation

C01D 1/30

. . . by crystallisation

C01D 1/32

. . . by absorption or precipitation

C01D 1/34

. . . with selective solvents

C01D 1/36

. . . by oxidation

C01D 1/38

. . . by dialysis

C01D 1/40

. . . by electrolysis

C01D 1/42

. . Concentration; Dehydration

C01D 1/44

. . Preparation in the form of granules, pieces, or other shaped products

C01D 3/00**Halides of sodium, potassium or alkali metals in general** ([{halides in general C01B 9/00}](#))

C01D 3/02

. Fluorides

C01D 3/04

. Chlorides

C01D 3/06

. . Preparation by working up brines; seawater or spent lyes

C01D 3/08

. . Preparation by working up natural or industrial salt mixtures or siliceous minerals

C01D 3/10

. Bromides

C01D 3/12

. Iodides

- C01D 3/14 . Purification
- C01D 3/145 . . {by solid ion-exchangers or solid chelating agents}
- C01D 3/16 . . by precipitation or adsorption {(C01D 3/145 takes precedence)}
- C01D 3/18 . . with selective solvents
- C01D 3/20 . . by melting
- C01D 3/22 . Preparation in the form of granules, pieces, or other shaped products
- C01D 3/24 . . Influencing the crystallisation process
- C01D 3/26 . Preventing the absorption of moisture or caking of the crystals

C01D 5/00 Sulfates or sulfites of sodium, potassium or alkali metals in general {(sulfites in general C01B 17/62)}

- C01D 5/002 . {Preventing the absorption of moisture or caking of the crystals by additives}
- C01D 5/004 . {Preparation in the form of granules, pieces or other shaped products}
- C01D 5/006 . {Recovery of sodium sulfate from coagulation baths for the spinning of viscose}
- C01D 5/008 . {Preparation of potassium sulfate from alunite}
- C01D 5/02 . Preparation of sulfates from alkali metal salts and sulfuric acid or bisulfates; Preparation of bisulfates
- C01D 5/04 . Preparation of sulfates with the aid of sulfurous acid or sulfites, e.g. Hargreaves process {(pyrosulfites or metabisulfites C01D 5/145)}
- C01D 5/06 . Preparation of sulfates by double decomposition
- C01D 5/08 . . with each other or with ammonium sulfate
- C01D 5/10 . . with sulfates of magnesium, calcium, strontium, or barium
- C01D 5/12 . Preparation of double sulfates of magnesium with sodium or potassium
- C01D 5/14 . Preparation of sulfites (C01D 5/04 takes precedence)
- C01D 5/145 . . {Pyrosulfites or metabisulfites}
- C01D 5/16 . Purification {(C01D 5/145 takes precedence)}
- C01D 5/18 . Dehydration {(C01D 5/145 takes precedence)}

C01D 7/00 Carbonates of sodium, potassium or alkali metals in general

- C01D 7/02 . Preparation by double decomposition
- C01D 7/04 . . with a fluoride or silico-fluoride (C01D 1/24 takes precedence)
- C01D 7/06 . Preparation via sodium or potassium magnesium carbonate
- C01D 7/07 . Preparation from the hydroxides
- C01D 7/08 . Preparation from or via cyano compounds of sodium or potassium (C01D 1/26 takes precedence)
- C01D 7/10 . Preparation of bicarbonates from carbonates (ammonia soda process C01D 7/18)
- C01D 7/12 . Preparation of carbonates from bicarbonates {or bicarbonate-containing product}
- C01D 7/123 . . {by thermal decomposition of solids in the absence of a liquid medium}
- C01D 7/126 . . {Multi-step processes, e.g. from trona to soda ash}
- C01D 7/14 . Preparation of sesquicarbonates

C01D 7/16	<ul style="list-style-type: none"> Preparation from compounds of sodium or potassium with amines and carbon dioxide
C01D 7/18	<ul style="list-style-type: none"> Preparation by the ammonia-soda process {(C01D 7/12 takes precedence)}
C01D 7/22	<ul style="list-style-type: none"> Purification
C01D 7/24	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Crystallisation
C01D 7/26	<ul style="list-style-type: none"> <ul style="list-style-type: none"> by precipitation or adsorption
C01D 7/28	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with selective solvents
C01D 7/30	<ul style="list-style-type: none"> <ul style="list-style-type: none"> by oxidation
C01D 7/32	<ul style="list-style-type: none"> <ul style="list-style-type: none"> by dialysis
C01D 7/34	<ul style="list-style-type: none"> <ul style="list-style-type: none"> by electrolysis
C01D 7/35	<ul style="list-style-type: none"> Varying the content of water of crystallisation or the specific gravity {(calcination B01J 6/00, F27B)}
C01D 7/37	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Densifying sodium carbonate
C01D 7/38	<ul style="list-style-type: none"> Preparation in the form of granules, pieces or other shaped products
C01D 7/40	<ul style="list-style-type: none"> <ul style="list-style-type: none"> influencing the crystallisation process
C01D 7/42	<ul style="list-style-type: none"> Preventing the absorption of moisture or caking
C01D 9/00	Nitrates of sodium, potassium or alkali metals in general {(preparation as fertilizers or of fertilizers containing them C05D 5/00)}
C01D 9/02	<ul style="list-style-type: none"> Preparation by working-up natural salt mixtures
C01D 9/04	<ul style="list-style-type: none"> Preparation with liquid nitric acid
C01D 9/06	<ul style="list-style-type: none"> Preparation with gaseous nitric acid or nitrogen oxides
C01D 9/08	<ul style="list-style-type: none"> Preparation by double decomposition
C01D 9/10	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with ammonium nitrate
C01D 9/12	<ul style="list-style-type: none"> <ul style="list-style-type: none"> with nitrates or magnesium, calcium, strontium, or barium
C01D 9/14	<ul style="list-style-type: none"> <ul style="list-style-type: none"> of salts of potassium with sodium nitrate
C01D 9/16	<ul style="list-style-type: none"> Purification
C01D 9/18	<ul style="list-style-type: none"> Preparation in the form of shaped products, e.g. granules
C01D 9/20	<ul style="list-style-type: none"> Preventing the absorption of moisture or caking
C01D 13/00	Compounds of sodium or potassium not provided for elsewhere
C01D 15/00	Lithium compounds
C01D 15/005	<ul style="list-style-type: none"> {Lithium hexafluorophosphate}
C01D 15/02	<ul style="list-style-type: none"> Oxides; Hydroxides
C01D 15/04	<ul style="list-style-type: none"> Halides
C01D 15/06	<ul style="list-style-type: none"> Sulfates; Sulfites
C01D 15/08	<ul style="list-style-type: none"> Carbonates; Bicarbonates
C01D 15/10	<ul style="list-style-type: none"> Nitrates
C01D 17/00	Rubidium, caesium or francium compounds
C01D 17/003	<ul style="list-style-type: none"> {Compounds of alkali metals}

C01D 17/006

- • {Preparation of potassium compounds comprising precipitating potassium ions by an organic reagent or extracting them by a liquid organic phase}