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*This heading comprises only the following subject matter:*

. ion-exchange apparatus and processes for purifying liquids or for extracting constituents therefrom

*but does not include the following subject matter, which is to be found in the headings indicated:*

- . processes and apparatus in which liquids are diffused through ion-exchange membranes (*e.g.* dialysis, osmosis)—B1X, Miscellaneous chemical apparatus &c
- . processes applicable to the extraction of particular chemical substances or particular classes of substances—*headings for substances extracted, e.g.* C1A, Inorganic substances; C2C, Organic compounds
- . processes for the recovery of metal values from solutions, *other than* conventional regeneration of water softeners—C1A, Inorganic substances

The exclusion references listed in this heading are not exhaustive. Reference should be made to the appropriate general heading/s for processes, materials, elements or devices which may be more widely applicable than can appropriately be classified in this heading

Relationship with the Universal Indexing Schedules (heading U1S)

In addition to recording the nature of broader processes or apparatus with or in which inventions classified here may be used, U1S is used, subject to its indexing rules, to index materials operated on and useful products obtained, except that where it is clearly intended to produce only a single useful product from a mixture of starting materials the latter are not indexed

Operative date for Key entries

The operative date of the terms in this heading is earlier than that of Edition A

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*To facilitate searches for combinations of features, throughout this heading each feature is indexed for which a coded term is available, irrespective of novelty*

- arrangement of ion-exchange material—
- J6A1 . horizontal bed
- . vertical bed—
- J6A2B . . continuously moving bed
- J6A2A . . fixed or stationary bed
- J6A2C . . pulsating bed
- direction of liquid flow—
- J6B1 . co-current flow of liquid and exchange material in moving bed
- J6B2 . counter-current flow of liquid and exchange material in moving bed
- J6B3 . downward flow
- J6B4 . upward flow
- materials—
- . anion exchangers—
- J3B2 . . acid radical exchanging
- J3B1 . . hydroxyl exchanging
- J3B3 . . strong base exchangers (*i.e.* containing tertiary amino, quaternary ammonium), phosphonium or arsonium, or tertiary sulphonium groups
- J3BX . . unspecified
- J3B4 . . weak base exchangers (*i.e.* containing primary and secondary amino groups)
- J3BU . . unclassified
- . cation exchangers—
- J3A1 . . hydrogen exchanging
- J3A3 . . mineral
- J3A2 . . sodium exchanging
- J3A4 . . strong acid exchangers (*i.e.* containing sulphonic acid groups)
- J3AX . . unspecified
- J3A5 . . weak acid exchangers (*i.e.* containing *other than* sulphonic acid groups)
- J3AU . . unclassified
- . combinations of exchangers—
- J3C2 . . anion and cation in separate beds
- J3C1 . . anion and cation monobed
- J3CU . . unclassified
- regeneration of ion-exchange materials—
- . in movable beds by—
- J4A3 . . continuous removal of portion of bed
- J4A2 . . periodic removal of portion of bed
- J4A1 . . periodic removal of whole bed
- J4B . in situ
- J4X . unspecified
- J4U . unclassified
- J5 testing condition of ion-exchange materials
- J6C valve arrangements