

CLEANING AGENT, CLEANING LIQUID AND CLEANING METHOD FOR
AROMATIC POLYAMIDE REVERSE OSMOSIS MEMBRANES

[ABSTRACT]

5 The present invention provides a cleaning agent, a cleaning liquid, and a
cleaning method, which are capable of effectively removing a contaminant that is not
able to be sufficiently removed by conventional cleaning liquids in cases where aromatic
polyamide reverse osmosis membranes used in water treatments are contaminated and
the performances of the aromatic polyamide reverse osmosis membranes such as the
10 permeation flux and the desalination rate are deteriorated. The present invention
provides a cleaning agent for aromatic polyamide reverse osmosis membranes, the
cleaning agent being composed of an aqueous solution which has a pH of 13 or more and
contains a stabilized halogen, a chelating agent that contains one or more substances
selected from among aliphatic carboxylic acids containing no amino group, phosphonic
15 acid compounds containing no amino group, polyphosphoric acids, and salts thereof, and
an alkaline agent. According to the present invention, an aromatic polyamide reverse
osmosis membrane is cleaned with use of a cleaning liquid that is composed of an
aqueous solution of this cleaning agent. A chloramine compound which is obtained by
mixing a compound having a primary amino group with hypochlorous acid and/or a
20 hypochlorite is suitable for use as the stabilized halogen.

FIG. 1