CLAIMS

1. A gas composition adjustment apparatus (100) comprising:

an adsorber (234, 235) containing an adsorbent that adsorbs at least one of components of a gas to be treated;

a supply pump (310) configured to supply the gas to be treated to the adsorber (234, 235); and

a discharge pump (320) configured to suck a gas from the adsorber (234, 235),

the gas composition adjustment apparatus (100) being configured to perform

a pressurization operation in which the supply pump (310) pressurizes the gas to be treated and supplies the gas pressurized to the adsorber (234, 235), and the gas flowing out from the adsorber (234, 235) is sent out as a first gas, and

a depressurization operation in which the discharge pump (320) sucks a gas from the adsorber (234, 235) and discharges the sucked gas, and the gas discharged from the discharge pump (320) is sent out as a second gas,

the supply pump (310) being

a positive displacement pump including a supply-side cylinder (311); a supply-side piston (312) housed in the supply-side cylinder (311); and a supply-side sealing member (313) attached to the supply-side piston (312) to seal a gap between the supply-side cylinder (311) and the supply-side piston (312),

the discharge pump (320) being

a positive displacement pump including a discharge-side cylinder (321); a discharge-side piston (322) housed in the discharge-side cylinder (321); and a discharge-side sealing member (323) attached to the discharge-side piston (322) to seal a gap between the discharge-side cylinder (321) and the discharge-side piston (322),

the discharge-side sealing member (323) containing a fluororesin and a fibrous carbon material as main components, and

the supply-side sealing member (313) containing a fluororesin and a particulate carbon material as main components.

2. The gas composition adjustment apparatus (100) of claim 1, wherein

the supply-side sealing member (313) has a linear expansion coefficient smaller than a linear expansion coefficient of the discharge-side sealing member (323).

3. The gas composition adjustment apparatus (100) of claim 1 or 2, wherein

the supply-side sealing member (313) has a Young's modulus higher than a Young's modulus of the discharge-side sealing member (323).

4. The gas composition adjustment apparatus (100) of any one of claims 1 to 3, wherein

the gas to be treated is atmospheric air,

the adsorbent in the adsorber (234, 235) adsorbs nitrogen which is a component of the gas to be treated,

the first gas has a lower nitrogen concentration and a higher oxygen concentration as compared to the gas to be treated,

the second gas has a higher nitrogen concentration and a lower oxygen concentration as compared to the gas to be treated, and

the gas composition adjustment apparatus (100) is configured to perform an operation of supplying the second gas to a storage (2) for storing a fresh product.

5. The gas composition adjustment apparatus (100) of any one of claims 1 to 3, wherein

the gas to be treated is atmospheric air,

the adsorbent in the adsorber adsorbs nitrogen which is a component of the gas to be treated,

the first gas has a lower nitrogen concentration and a higher oxygen concentration as compared to the gas to be treated,

the second gas has a higher nitrogen concentration and a lower oxygen concentration as compared to the gas to be treated, and

the gas composition adjustment apparatus (100) is configured to perform an operation of supplying the first gas to a user.