

Desalination of Pineapple Juice

Mitsubishi Chemical Corporation
Separation Materials Department

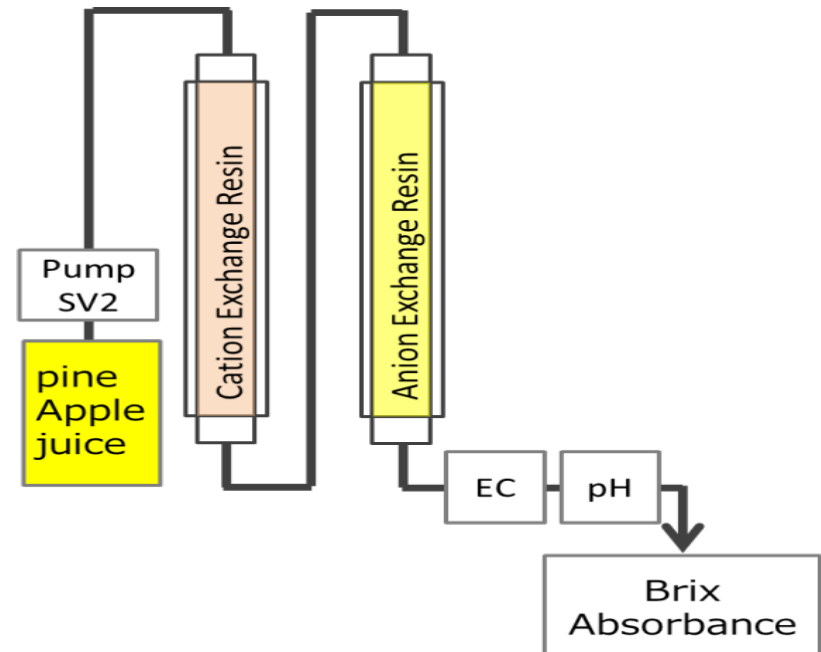
Desalination of Pineapple Juice

Analysis of Pineapple Juice

Brix	%	10.3
Electrical conductivity	μS/cm	5,310
pH	-	4.36
Absorbance A₄₂₀¹⁰	-	0.510
Total Cation	mg-CaCO₃/L	3,375
Total Anion	mg-CaCO₃/L	5,846
Weak acid	mg-CaCO₃/L	1,642
Glucose	%	3.8
Fructose	%	2.2

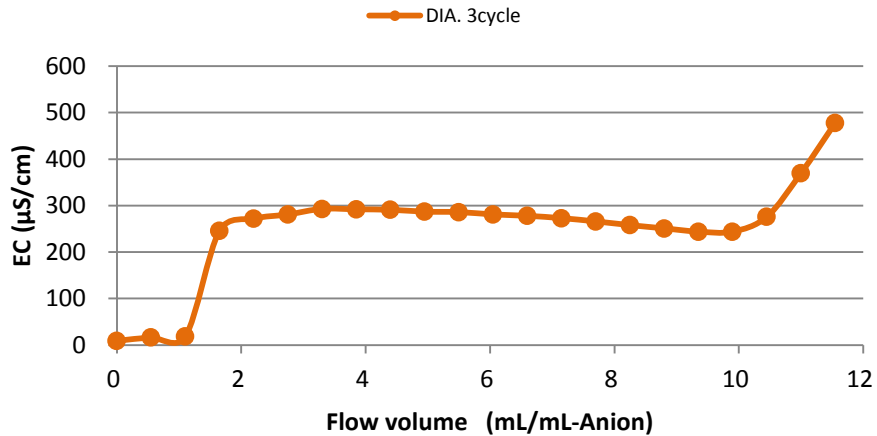
Flowchart of Desalination of Pineapple Juice

Process : 2B2T [Cation IER → Anion IER]
Resins : Cation exchange resin PK216
Anion exchange resin WA30

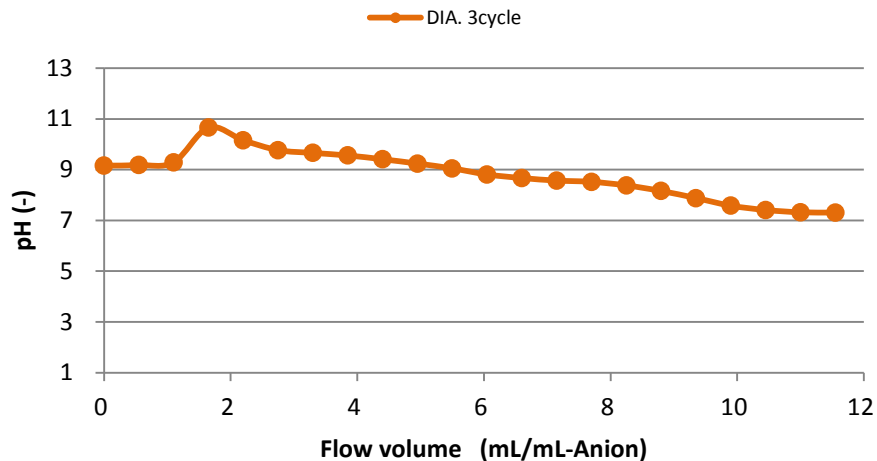


Results of desalination(1)

Electrical conductivity (EC)



pH versus Flow volume

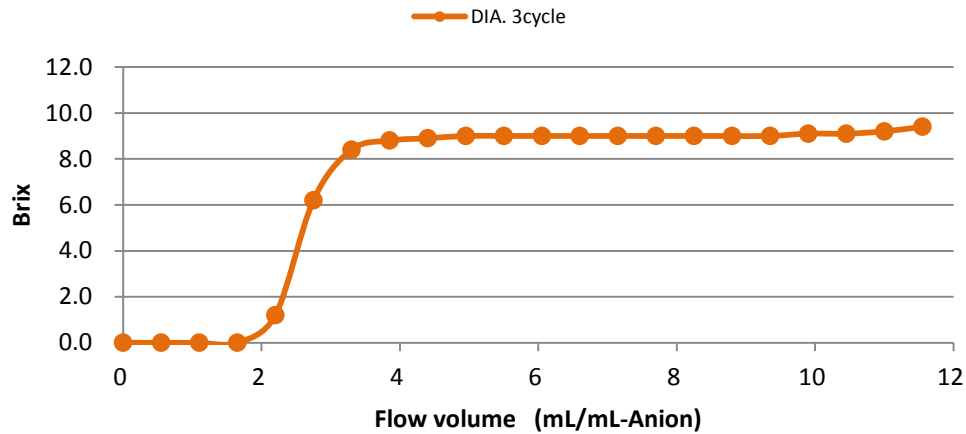


Ion chromatography analysis

	Ion (ppm)	Standard solution	After treatment
Anion	Cl ⁻	650	1.3
	NO ³⁻	38	0.33
	PO ₄ ²⁻	320	<0.1
	SO ₄ ²⁻	690	0.37
	Malic acid	2000	<0.1
	Citric acid	2000	0.56
Cation	Na ⁺	220	2.5
	K ⁺	1900	97
	Ca ²⁺	96	<0.1
	Mg ²⁺	100	0.1

Results of desalination(2)

Brix versus Flow volume



the change of the color



Removal rate(Decolorization rate)

