



Tecnoimpianti
Food Technology

Ion Exchange and Adsorbent resins plants for oenological applications

OENOLOGICAL APPLICATIONS



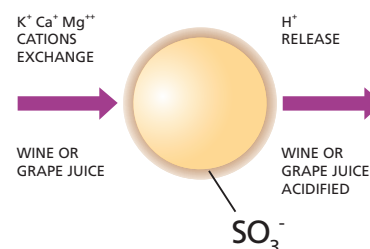
CONSULTING
FIRM RFP SRLS
RESINS FOOD PROCESSES

GRAPE JUICE AND WINE ACIDIFICATION.

MINISTAB and **MAXISTAB** are ion-exchange resins plants food grade suitable for acidification of grape must or wines. During the treatment of the grape juice or wine the strong cationic resin installed in the column retains the potassium cation (K+) and releases hydrogen ions (H+) causing the increase in acidity with consequent reduction in the formation of potassium bitartrate. This process is of fundamental importance for the reduction of the costs of stabilization of wines.



Scheme



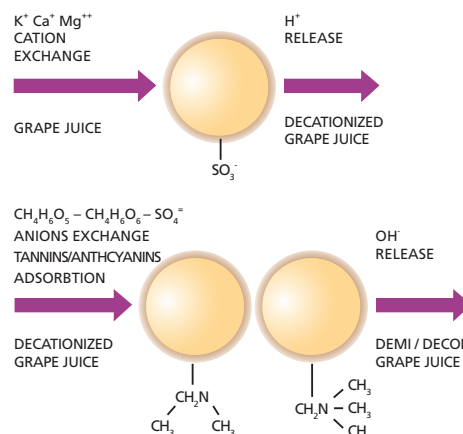
Technical features: grape juice / wine reference 1800 ppm K+

DENOMINATION	Capacity hl/hour	Production hl/24 hour	Volume lt resin	Dimension skid m (bxh)	Dimension Columns (dxh)
MINISTAB 300	15	250	300	1,5 x 2,4 x 2,6	0,5 x 3,5
MINISTAB 300 DUPLEX	15	360	2 x 300	1,5 x 2,4 x 2,6	0,5 x 3,5
MINISTAB 800	40	670	800	1,5 x 2,4 x 2,6	0,8 x 3,5
MINISTAB 800 DUPLEX	40	1000	2 x 800	1,5 x 2,4 x 2,6	0,8 x 3,5
MAXISTAB 2300	120	2000	2300	1,5 x 2,8 x 3,0	1,4 x 3,5
MAXISTAB 2300 DUPLEX	120	3000	2 x 2300	1,5 x 2,8 x 3,2	1,4 x 3,5
MAXISTAB 3000	150	2500	3000	1,5 x 2,8 x 3,0	1,4 x 4,0
MAXISTAB 3000 DUPLEX	150	3600	2 x 3000	1,5 x 2,8 x 3,2	1,4 x 4,0

GRAPE JUICE DECOLORIZATION / DEMINERALIZATION.

MINIDEMI and **MAXIDEMI** are ion-exchange resins plants food grade suitable for the production of concentrated rectified grape must (MCR). During the treatment of the grape juice, the cationic and anionic resins installed in the columns retain all the mineral salts, the organic acids and the polyphenols in order to produce an aqueous glucose and fructose sugar solution which are the natural sugars present in the grapes. This process combined with evaporation allows the production of concentrated rectified must used to increase the saccharometric grade of wines and as a natural sweetener.

Scheme



Technical features: grape juice reference 20 °Brix

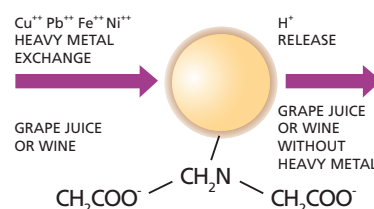
DENOMINATION	Capacity hl/hour	Production hl/24 hour	Volume lt resin	Dimension skid m (bxh)
MINIDEMI 1200	40	320	4050	1,5 x 2,8 x 4,0
MAXIDEMI 2400	80	650	7800	1,5 x 2,8 x 4,4

OENOLOGICAL APPLICATIONS

IRON AND HEAVY METAL REMOVAL FROM GRAPE JUICE OR WINE

MINIMETAL and **MAXIMETAL** are chelating resin plants food grade suitable for the removal of iron, lead and copper. During the treatment of grape juice or wine, the chelating resin installed in the column retains iron and heavy metals and releases hydrogen ions (H+). This process is of fundamental importance for the decontamination of wines or musts from heavy metals and for the preparation of special products such as balsamic vinegars.

Scheme



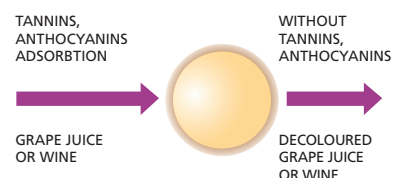
Technical features: grape juice / wine reference 15 ppm Fe+++

DENOMINATION	Capacity hl/hour	Production hl/24 hour	Volume lt resin	Dimension skid m (bxh)	Dimension Columns (dxh)
MINIMETAL 300	15	250	300	1,5 x 2,4 x 2,6	0,5 x 3,5
MINIMETAL 300 DUPLEX	15	360	2 x 300	1,5 x 2,4 x 2,6	0,5 x 3,5
MINIMETAL 800	40	670	800	1,5 x 2,4 x 2,6	0,8 x 3,5
MINIMETAL 800 DUPLEX	40	1000	2 x 800	1,5 x 2,4 x 2,6	0,8 x 3,5
MAXIMETAL 2300	120	2000	2300	1,5 x 2,8 x 3,0	1,4 x 3,5
MAXIMETAL 2300 DUPLEX	120	3000	2 x 2300	1,5 x 2,8 x 3,2	1,4 x 3,5
MAXIMETAL 3000	150	2500	3000	1,5 x 2,8 x 3,0	1,4 x 4,0
MAXIMETAL 3000 DUPLEX	150	3600	2 x 3000	1,5 x 2,8 x 3,2	1,4 x 4,0

GRAPE JUICE AND WINE DECOLOURATION WITHOUT ANTHOCYANINS OR TANNINS RECOVERY.

MINICOLOR NR and **MAXICOLOR NR** are adsorbent resin plant suitable for the decolorization of grape juice or wine. During the treatment of the grape juice or wine the adsorbent resin adsorb the polyphenols such as anthocyanins and tannins present in white or red grapes. This process allows the production of decoloured must.

Scheme



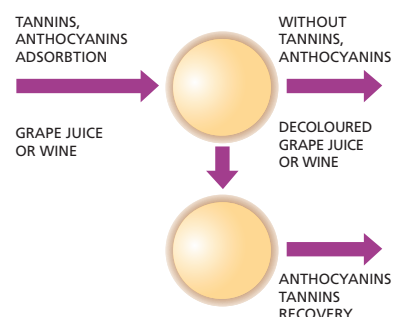
Technical features: grape juice / red wine reference 15 colour points

DENOMINATION	Capacity hl/hour	Production hl/24 hour	Volume lt resin	Dimension skid m (bxh)	Dimension Columns (dxh)
MINICOLOR NR 800	25	400	800	1,5 x 2,4 x 2,6	0,8 x 3,5
MINICOLOR NR 800 DUPLEX	25	600	2 x 800	1,5 x 2,4 x 2,6	0,8 x 3,5
MAXICOLOR NR 2300	70	1200	2300	1,5 x 2,8 x 3,0	1,4 x 3,5
MAXICOLOR NR 2300 DUPLEX	70	1800	2 x 2300	1,5 x 2,8 x 3,2	1,4 x 3,5
MAXICOLOR NR 3000	90	1500	3000	1,5 x 2,8 x 3,0	1,4 x 4,0
MAXICOLOR NR 3000 DUPLEX	90	2200	2 x 3000	1,5 x 2,8 x 3,2	1,4 x 4,0

GRAPE JUICE AND WINE DECOLOURATION WITH ANTHOCYANINS AND TANNINS RECOVERY

MINICOLOR and **MAXICOLOR** are adsorbent resins plants suitable for the decolorization of grape juice or wine. During the treatment of the grape juice or wine the adsorbent resin adsorb the polyphenols such as anthocyanins and tannins present in white or red grapes. The polyphenols adsorbed by the resin can be recovered by means of an optional filter. This process allows the production of decoloured grape juice and anthocyanine or tannins.

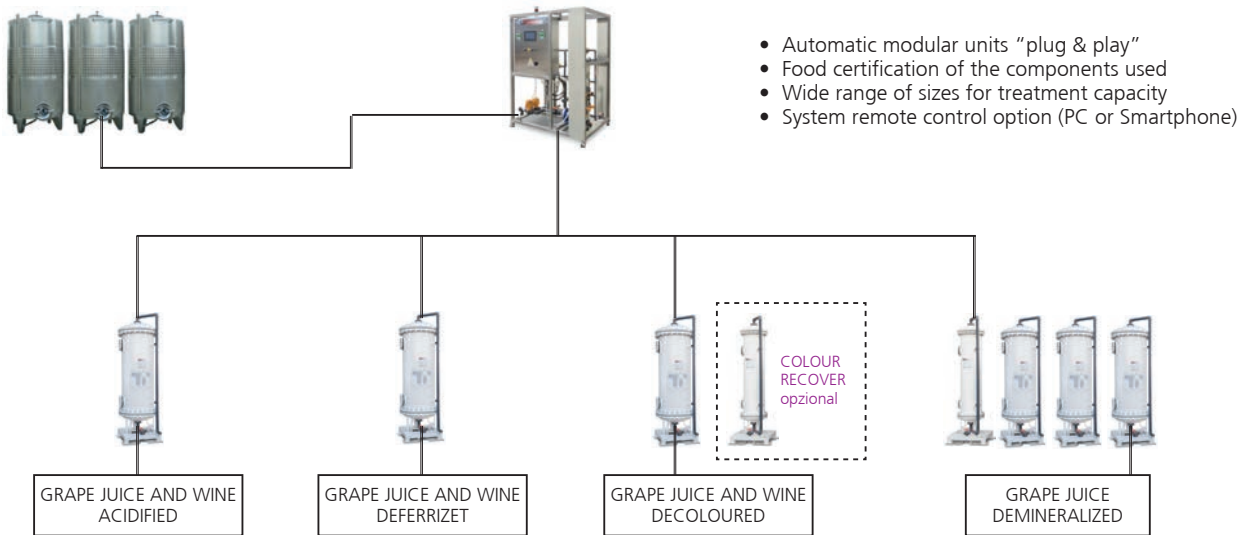
Scheme



Technical features: grape juice / red wine reference 15 colour points

DENOMINATION	Capacity hl/hour	Production hl/24 hour	Volume lt resin	Dimension skid m (bxh)	Dimension Columns (dxh)	Volume extr./cycle lt
MINICOLOR 800	25	400	800	1,5 x 2,4 x 2,6	0,8 x 3,5	900
MINICOLOR 800 DUPLEX	25	600	3 x 800	1,5 x 2,4 x 2,6	0,8 x 3,5	900
MAXICOLOR 2300	70	1200	2300	1,5 x 2,8 x 3,0	1,4 x 3,5	2500
MAXICOLOR 2300 DUPLEX	70	1800	3 x 2300	1,5 x 2,8 x 3,2	1,4 x 3,5	2500
MAXICOLOR 3000	90	1500	3000	1,5 x 2,8 x 3,0	1,4 x 4,0	3500
MAXICOLOR 3000 DUPLEX	90	2200	3 x 3000	1,5 x 2,8 x 3,2	1,4 x 4,0	3500

ION EXCHANGE AND ADSORBENT RESINS PLANTS FOR OENOLOGICAL APPLICATION CHARACTERISTICS:



- Automatic modular units "plug & play"
- Food certification of the components used
- Wide range of sizes for treatment capacity
- System remote control option (PC or Smartphone)

- Modular systems easy to maintain
- Easy to install, move and program
- Automatic hydraulic circuit in PVC, electro-pneumatic valves and instrumentation food grade
- Alarms for signaling anomalies
- Automation with Siemens PLC - touch screen and electrical panel according to current EU regulations
- Remote control of the system with a PC or smartphone
- Immediate technical assistance and spare parts always available

- Two types of filters: stainless steel AISI 316L or ebonited (coated internally with food rubber)
- Two dilution systems: ejectors or dosing pumps
- Two operating schemes: single or duplex



- Food grade selected MITSUBISHI-RESINDION resins
- No loss of wine or must during treatment
- Low dilution during sweet-on and sweet-off
- Reduced consumption of demineralized water and reagents for resins regeneration
- Regeneration with sulfuric acid or hydrochloric acid
- End of production cycle determined by the online PH meter
- End of regeneration cycle determined by the online conductivity meter



For more information contact the
area representative



Tecnoimpianti
Food Technology

AREA REFERENT

Division of Tecnoimpianti Water Treatment S.r.l.
Via Salvo d'Acquisto, 16/B - 20060 Pozzuolo M. (MI)
Tel. +39 02 95358203 - Email: info@tecnoimp.it
www.tecnoimp.com