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### PROCESS SYSTEM

**The must obtained  
is CE 1493/1999  
compliant**

The following system is specially designed to obtain concentrated must and grape juice from sulphite containing grape juice. The system produces high quality concentrate that complies both with strict regulation and with the client needs ( $\text{SO}_2$ , HMF, °Brix y THK) at low processing costs.

The main unit for obtaining ready to use grape must is the de-sulphiting unit. This unit can be attached to the evaporation unit in order to increase the energy efficiency of the process.

The equipment is mainly formed by three sub-units:

- A multiple effect evaporation de-sulphiting unit, operating under vacuum for sulphited grape must.
- $\text{SO}_3$  recovery system for evaporated vegetation water.
- Neutralization column for the  $\text{SO}_2$  gas emissions.

Maximum energy efficiency of the supplied steam.

Recovery of vegetation water.

Recovery of concentrated  $\text{SO}_3$ .

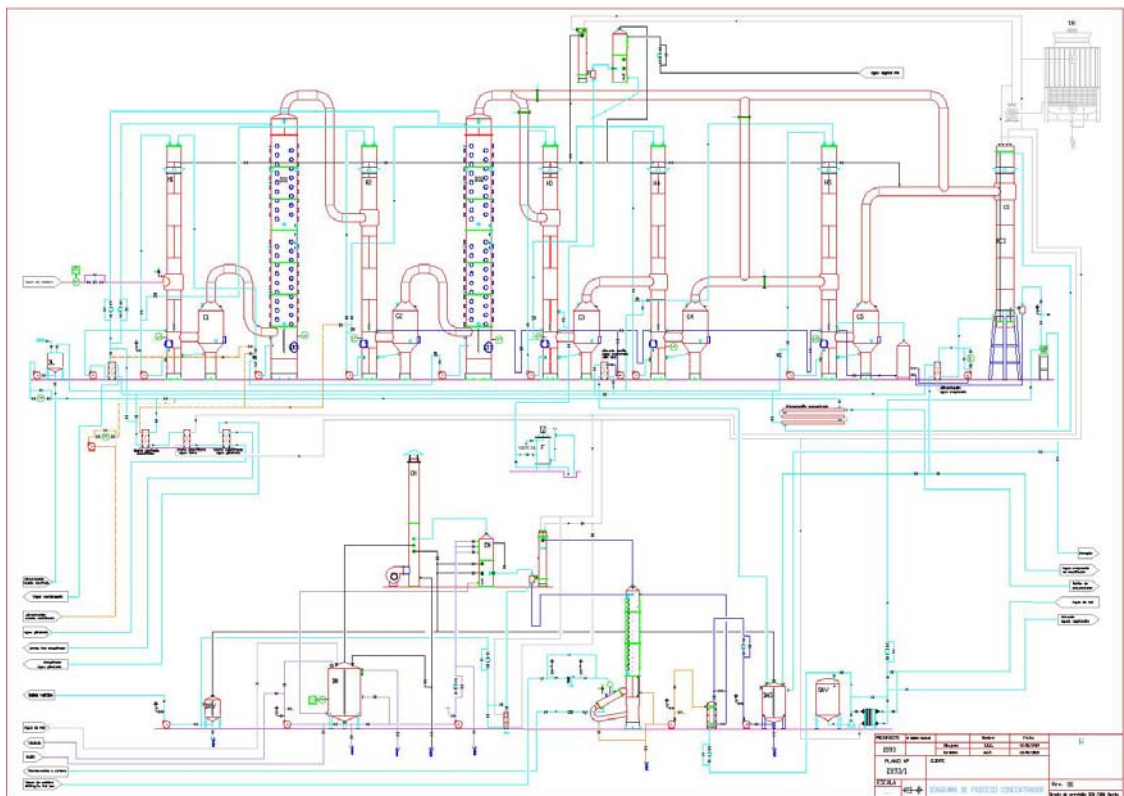
The sulphited must is introduced in the first effect of the evaporation system where a pre-concentrated must is obtained in the bottom, and the evaporation water together with the  $\text{SO}_3$  is led by the top. The must is further concentrated in the following concentrating units.

The water with  $\text{SO}_3$  is then treated in the de-sulphiting column where concentrate  $\text{SO}_3$  and clean water are obtained. The  $\text{SO}_2$  concentrate is suitable to use for sulphiting fresh grape juice, and the water with  $\text{SO}_3$  content less than 10 ppm is suitable to reuse in the industrial process.

The gases that escape from the de-sulphiting unit are neutralised in the neutralization column with  $\text{NaOH}$  where a solution of  $\text{Na}_2\text{SO}_3$  is obtained and the emissions to the atmosphere are reduced to less than  $0,1 \text{ g/Nm}^3$  required by the current law.

The concentrated juice without  $\text{SO}_3$  obtained after all the process is cooled and ready to sell or store.

## PROCESS DIAGRAM



## INSTALLATION EXAMPLES

| Concentration and de-sulphitation system (grape must, fruit juice, ...) for J. GARCIA CARRIÓN in Jumilla (Murcia) with a treatment capacity of 10.000 Kg/h

| Concentration and de-sulphitation system (grape must, fruit juice, ...) for MOSTINSA in Valdepeñas (Ciudad Real) with a treatment capacity of 8.000 Kg/h

| Concentration and de-sulphitation system (grape must, fruit juice, ...) for VIÑAOLIVA in Almendralejo (Badajoz) with a treatment capacity of 8.000 Kg/h

| Concentration and de-sulphitation system (grape must, fruit juice, ...) for SECNA in Benifaio (Valencia) with a treatment capacity of 8.000 Kg/h

| Concentration and de-sulphitation system (grape must, fruit juice, ...) for MOSTOS DEL PACIFICO in Curicó (Chile) with a treatment capacity of 10.000 Kg/h

