SCOTT LABORATORIES

FERMENTATION MANAGEMENT

A FOCUS ON NUTRITION

In order to conduct a healthy and a complete fermentation, yeast need more than nitrogen. In fact, the survival factors and mineral and vitamin co-factors are essential. If limited and/or imbalanced, the yeast will struggle to complete the fermentation and the resulting wine may be slow, sluggish or stuck, and the production of negative sensory compounds may be obvious.

To calculate your additions, based on sugar, yeast strain requirements, and your fermentation goals, follow the outline below.

1. To tailor a fermentation plan to your needs, begin by calculating the theoretical nitrogen requirements based on two factors: sugar to be fermented and the yeast strain requirements.

SUGAR	YEAST STRAIN NITROGEN REQUIREMENTS		
Brix	Low	Medium	High
20	150	180	250
22	165	200	275
24	180	220	300
26	195	240	325
28	210	260	350
30	225	280	375

Table 1

2. Calculate the supplemented nitrogen required:
   a. Juice/Must YAN – Theoretical Nitrogen required (table 1) = SUPPLEMENTED YAN

3. Determine fermentation goal:
   a. Fermentation security
   b. Fermentation security and optimization of thiols
   c. Fermentation security and optimization of esters

4. Once YAN supplementation and fermentation goal has been determined, follow one of the three protocols outlined below.
   a. The nitrogen required to secure the fermentation is supplied by the Fermaid family of complex yeast nutrients. The Go-Ferm Protect Evolution is an autolyzed yeast naturally providing the essential survival factors and vitamins to balance the nitrogen uptake and act as fermentation security co-factors. The goal of the Stimula range is to naturally supply vitamins and minerals to assist with the yeasts aromatic metabolism as well as supply nitrogen. To optimize yeast performance, all components are required and solely focusing on nitrogen management is no longer appropriate for a healthy fermentation.

GOAL: FERMENTATION SECURITY

YAN REQUIRED TO SUPPLEMENT	AT YEAST REHYDRATION PHASE	AT 2-3 BRIX SUGAR DROP	AT ⅓ SUGAR DROP
50 ppm	Go-Ferm Protect Evolution®	No addition	30 g/hL Fermaid® O
100 ppm	Go-Ferm Protect Evolution®	20 g/hL Fermaid® O	20 g/hL Fermaid® O + 12.5 g/hL Fermaid® K
150 ppm	Go-Ferm Protect Evolution®	40 g/hL Fermaid® O	30g/hL Fermaid® A

GOAL: OPTIMIZATION OF THIOLS

YAN REQUIRED TO SUPPLEMENT	AT YEAST REHYDRATION PHASE	AT 2-3 BRIX SUGAR DROP	AT ⅓ SUGAR DROP
50 ppm	Go-Ferm Protect Evolution®	Stimula Sauvignon Blanc™ 40 g/hL	10 g/hL Fermaid® O
100 ppm	Go-Ferm Protect Evolution®	Stimula Sauvignon Blanc™ 40 g/hL	20 g/hL Fermaid® O
150 ppm	Go-Ferm Protect Evolution®	Stimula Sauvignon Blanc™ 40 g/hL	40 g/hL Fermaid® O

GOAL: OPTIMIZATION OF ESTERS

YAN REQUIRED TO SUPPLEMENT	AT YEAST REHYDRATION PHASE	AT 2-3 BRIX SUGAR DROP	AT ⅓ SUGAR DROP
50 ppm	Go-Ferm Protect Evolution®	No addition	Stimula Chardonnay™ 40 g/hL
100 ppm	Go-Ferm Protect Evolution®	20 g/hL Fermaid® O	Stimula Chardonnay™ 40 g/hL
150 ppm	Go-Ferm Protect Evolution®	40 g/hL Fermaid® O	Stimula Chardonnay™ 40 g/hL