Variatl thiols such as 4-mercapto-4-methylpentan-2-one (4MMP), 3-mercaptohexan-1-ol (3MH), and 3-mercaptohexyl-lactate (3MHA) have been identified as important contributors to the varietal aroma of Sauvignon blanc wine and other white wine varieties. The 4MMP and 3MH are not present in the grapes as free thiols but are released during alcoholic fermentation from grape-derived, nonvolatile precursors. This is yeast dependent, based on the β-lyase activity of the wine yeast. The precursors uptake occurs during the yeast growth phase, when multiplication rate is at its maximum. 

Thiols production by wine yeast is done in 2 successive steps: firstly the cysteinylated and glutathionylated precursors are uptaken by the yeast cells, and then converted through the yeast β-lyase action into volatile thiols.

The specific Stimula works in such a way that it facilitates the conversion of the glutathionylated and cysteinylated precursors into thiols in different wine yeasts. For example, in the figure below, we can see the decrease in CYS-4MMP, whereas the 4MMP conjugates are uptaken by the yeast cells, and then converted through the yeast β-lyase action into volatile thiols.

The impact appears to be stronger on the 4MMP and 3MH, and depends as well on the wine yeast used, some yeast having a stronger conversion rate than other.

Ultimately, this gives higher concentrations of thiols 4MMP (blackcurrant, boxtree passion fruit) and 3MH (grapefruit, passionfruit) in Sauvignon blanc and is different for different wine yeasts.

Please contact your local representative for yeast recommendations.