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**Thesis title:**

**“Partial analytical characterization of enological Inactive Yeast Product and their impact on sulfur compounds of wine”**

**Summary:**

The wine world is in perpetual evolution. And, new researches and understandings pave the new trends in wine industry. In recent years the uses of inactive dry yeast derived products have been used as enological tools to accomplish the specific attribution of wine. There are many enological products with specific tags available in the market. These enological products are specially designed to explore the enological potential besides fermentation. However, the scientific background and information related to these products is scanty.

First enological inactive yeast derived (IYD) product in wine making may come in existent as the yeast ghost or yeast hulls that contained mostly cell wall of yeast around 1984. Then, year by year IYD products has added up. However, the products were no longer limited to only cell walls also spring up with other constituents of cell or as the whole cell. Subsequently, many other options have emerged under this section. Inactive yeast, yeast autolysates, yeast extracts, and yeast hulls or cell walls can be included under the generic name IYD preparations. These IYD enological products are readymade source of quick release of specific components of yeast in wine. These could be called more naturals compare with absolute synthetic compounds.

Sulfur compounds in wine are indispensable and always consider capricious towards varietal to off- flavors. The management of sulfur compounds in wine is intangible in general wine making. Few IYD product's manufactures claim categorically that sulfur defect management could be corrected or harmonized in most cases with judicious addition of some correctors and balancer, which comes under IYD products. International Organization of Vine and Wine (OIV) and The European Union do not allow addition by itself of some compounds like glutathione, mannoproteins. However, they allow the IYD products enriched with these compounds in wine.

There is no as such chemical characterization of the IYD products provided by the manufacturer. These products are sold in the market with the descriptive tags like rich in copper, glutathione, antioxidants etc. The chemical characterization is not very obvious often due to existence of wide differences among the IYD products.

This study is aimed to understand the utility and chemical analysis of selected products. As, these products chemical analysis is not done adequately. The chemical characterization also not available along with the products.