Saccharomyces cerevisiae var. diastaticus Information Sheet:

Saccharomyces cerevisiae var. diastaticus is a natural variant of Saccharomyces cerevisiae that can hydrolyze wort dextrans into fermentable sugars (Andrews and Gilliland, 1952). This ability has been linked to the presence of STA genes, which encode for the exoenzyme glucoamylase, also referred to as amyloglucosidase (Tamaki, 1978). This amylolytic activity can lead to hyperattenuation, and/or secondary fermentation which can cause excess carbon dioxide formation in bottles, cans or kegs. It is for this reason that contamination with Saccharomyces cerevisiae var. diastaticus is generally unwanted.

Saccharomyces cerevisiae var. diastaticus can be found in a variety of places in the brewery including, but not limited to: bottling lines, pipework, pitching yeast, the brewhouse, and fermentation cellar (Meier-Dörnberg et al., 2017). Several microbiological techniques can be used for detection, such as growth on Lin’s Cupric Sulfate Media (LCSM), starch agar plates, as well as growth in certain enrichment broths. Additionally, since the dextrinase activity has been linked to STA genes, polymerase chain reaction (PCR) can be used to detect Saccharomyces cerevisiae var. diastaticus (Yamauchi et al., 1998) however, molecular techniques require specialized equipment and are more expensive than conventional plating techniques. These restrictive conditions mean these techniques are not feasible at every brewery but certain independent laboratories offer these services.

It is worth noting that not all STA1 positive yeast are considered contaminants. In fact, there are several “classic” brewing strains that have been used and cultivated for more than 30 years and are generally classified as “high-attenuators.”