

In this research, we embarked on an in-depth exploration to discern the moderately damaged beer from its pristine counterparts by non-professional consumers in a controlled social setting. The approach adopted was underpinned by the application of rigorous statistical testing methodologies, with an underlying potential for further refinement to yield enhanced insights. Crucially, the study identified that the outcomes could be skewed by phenomena such as taster fatigue and the saturation of ambient air with light-struck odours, thereby necessitating their consideration. It occurs even though tests were taken in spacious, well ventilated, room and each taster had enough, 3 meters at least, space around him. The research innovatively combines the optometric measurements of beer samples' absorption with the findings from structured tastings, enabling assumptions to be made about the absolute threshold of beer damage that a statistically significant number of tasters is able to reliably detect. For Pilsner Urquell, the threshold of perceptible damage was delineated to be in excess of 0.067 absorption units (a.u.). For Excellent 11°, the damage threshold was calculated to fall within the range of 46 to 67 thousandths of absorption units (a.u.). When we compared results divided by gender, we concluded that women can better recognize damaged beer. Interestingly, a positive correlation was observed between the inherent absorption of a beer bottle and the subsequent change in absorption as a damage indicator. This correlation was quantified by a robust Pearson's correlation coefficient of 0.826. This study, therefore, contributes to existing knowledge by offering a comprehensive guide for the orchestration of analogous tastings, the application of statistical analysis techniques, and the interpretation of the resulting data. Overall, this research can serve as a guide how to plan, organise and analyse results of similar sensometric tests.