

# CATPCA in R: Application to Sensorial Data of Wine-Tasting - Support Tables

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The present document serves as a support to the article “CATPCA in R: Application to Sensorial Data of Wine-Tasting”, presenting the characterization of the variables present in the dataset under study.

The sensory dataset was collected by a research group affiliated with the Center of Biological Engineering at the University of Minho, coordinated by Professor José Oliveira. The dataset compiles information on evaluations of seven distinct wines categorized from A to G, featuring qualitative sensory descriptors determined by a panel of six wine tasters. Following the processing and elimination of non-essential variables, the dataset comprises 126 observations and 25 variables, categorized into Olfactory Assessment, Gustatory Assessment, and Appearance groups. In total, the dataset encompasses 107 categories, with five variables having missing values.

From tables 1 to 4, there is a description of the variables grouped according to the evaluation fields to which they belong.

In table 1, the characterization of the variables “Wine” and “Taster” is present, upon which the remaining variables depend.

**Table 1.** Characterization of the variables “Wine” and “Taster”.

Variable	Measurement	scale	Scale description
“Wine”	Qualitative nominal		From A to G
“Taster”	Qualitative nominal		From 1 to 6

In table 2, there is a description of the variables belonging to the Olfactory Assessment group.

Table 2: Characterization of the variables related to the Olfactory Assessment group.

Variable	Measurement scale	Scale description
“Citrus_fruit”	Qualitative ordinal	From 0 to 5
“Tree_fruit”	Qualitative ordinal	From 0 to 5
“Tropical_fruit”	Qualitative ordinal	From 0 to 5
“Dry_fruit”	Qualitative ordinal	From 0 to 5
“Floral”	Qualitative ordinal	From 0 to 5
“Fresh_vegetable”	Qualitative ordinal	From 0 to 5
“Dry_vegetable”	Qualitative ordinal	From 0 to 5
“Honeyed”	Qualitative ordinal	From 0 to 5
“Mineral”	Qualitative ordinal	From 0 to 5
“Carbon_dioxide”	Qualitative ordinal	From 0 to 5

Table 3 presents a description of the variables related to the Gustatory Assessment group.

Table 3: Characterization of the variables related to the Gustatory Assessment group.

Variable	Measurement scale	Scale description
“Sweetness”	Qualitative ordinal	From 0 to 5
“Acidity”	Qualitative ordinal	From 0 to 5
“Heat”	Qualitative ordinal	From 0 to 5
“Bitterness”	Qualitative ordinal	From 0 to 5
“Astringency”	Qualitative ordinal	From 0 to 5
“Structure”	Qualitative ordinal	From 0 to 5
“Balance”	Qualitative ordinal	From 0 to 5
“Persistence”	Qualitative ordinal	From 0 to 5

Lastly, in table 4, the variables belonging to the Appearance evaluation group are described.

Table 4: Characterization of the variables related to the Appearance group.

Variable	Measurement scale	Scale description
“Clarity”	Qualitative nominal	limpid, crystalline and sli_opalenscent
“Color”	Qualitative nominal	citrus, straw and golden
“Intensity”	Qualitative nominal	medium, strong and weak
“Color_quality”	Qualitative ordinal	From 0 to 5
“Evolution”	Qualitative nominal	sli_evolved, evolved and young