

Accepted Manuscript

Cold maceration application in red wine production and its effects on phenolic compounds: A review

Jose Luis Aleixandre-Tudo, Wessel du Toit



PII: S0023-6438(18)30412-2

DOI: [10.1016/j.lwt.2018.04.096](https://doi.org/10.1016/j.lwt.2018.04.096)

Reference: YFSTL 7107

To appear in: *LWT - Food Science and Technology*

Received Date: 10 November 2017

Revised Date: 28 March 2018

Accepted Date: 29 April 2018

Please cite this article as: Aleixandre-Tudo, J.L., du Toit, W., Cold maceration application in red wine production and its effects on phenolic compounds: A review, *LWT - Food Science and Technology* (2018), doi: 10.1016/j.lwt.2018.04.096.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1 Cold maceration application in red wine production and its effects on 2 phenolic compounds: a review

3 Jose Luis Aleixandre-Tudo* and Wessel du Toit

4 Department of Viticulture and Oenology, Stellenbosch University, Private Bag X1, Matieland
5 7602, South Africa

6 *Corresponding author

7 Abstract

8 An increasing number of winemaking practices are currently being used by winemakers
9 worldwide. However, the impact of these techniques on wine composition and quality is
10 often not clear. One of these techniques is the use of cold maceration before the
11 fermentation process. Cold maceration, often used in the red winemaking process, have
12 some important logistic, economic and quality implications. The rationale behind the
13 technique is that during this period, while kept at a low temperature to avoid the start of
14 the fermentation process, an increased extraction of compounds from the solid parts of the
15 berries takes place. Theoretically phenolic compounds, mainly coloured compounds such as
16 anthocyanins, among others, are extracted during this pre-fermentative period, thus
17 increasing its final content in the resulting wines. However, contradictory results have been
18 observed in the literature, probably due to the number of factors that might influence the
19 effectiveness of the cold maceration contact process. Cultivar, the grape's ripening status,
20 temperature, length and the combination of cold maceration with enzyme or dry ice
21 additions seems to play a major role in the efficacy of this practice. As the last publication
22 that reviewed the effect of cold maceration practices in red wines dates from 2005, this
23 manuscript focusses on the literature reported during the 2006-2017 period.

24 Key words

25 Phenolic compounds, cold maceration, cold soak, dry ice, tannins, anthocyanins, colour

26

27

28

Download English Version:

<https://daneshyari.com/en/article/8890793>

Download Persian Version:

<https://daneshyari.com/article/8890793>

[Daneshyari.com](https://daneshyari.com)