Flavour release of aldehydes and diacetyl in oil/water systems - DTU Orbit (08/12/2018)

Flavour release of aldehydes and diacetyl in oil/water systems

The concentration- and time-dependent release of three C-6-aldehydes, six C-9-aldehydes and diacetyl was studied in model systems. The systems were water, rapeseed oil and oil-in-water emulsions. Dynamic headspace sampling was used to collect the volatile compounds. In the concentration-dependent release experiment, the C-6-aldehydes were released in equal proportions from the aqueous and the emulsion systems, but in lower amounts from the pure oil. The amounts of C-9-aldehydes released decreased with increasing oil content. All aldehydes were released more rapidly from the aqueous system than from the pure oil. The release over time for diacetyl and (E,E)-2,4-hexadienal showed a linear relationship in all systems. The other compounds followed an exponential relationship between the time and the fraction released in the aqueous systems. It was demonstrated that the release of the volatile compounds was dependent on the chain length, the degree of unsaturation as well as the characteristics of the model system. (C) 2000 Elsevier Science Ltd. All rights reserved.

General information
State: Published
Organisations: National Institute of Aquatic Resources, Department of Biotechnology
Pages: 355-362
Publication date: 2000
Peer-reviewed: Yes

Publication information
Journal: Food Chemistry
Volume: 71
Issue number: 3
ISSN (Print): 0308-8146
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 5.19 SJR 1.793 SNIP 2.109
Web of Science (2017): Impact factor 4.946
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 4.85 SJR 1.731 SNIP 2.095
Web of Science (2016): Impact factor 4.529
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 4.31 SJR 1.582 SNIP 1.946
Web of Science (2015): Impact factor 4.052
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 3.92 SJR 1.557 SNIP 2.01
Web of Science (2014): Impact factor 3.391
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 3.87 SJR 1.554 SNIP 2.056
Web of Science (2013): Impact factor 3.259
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 3.98 SJR 1.762 SNIP 2.342
Web of Science (2012): Impact factor 3.334
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 4.17 SJR 1.911 SNIP 2.383
Web of Science (2011): Impact factor 3.655