Міністерство освіти і науки України

Національний університет
харчових технологій

84 Міжнародна наукова конференція молодих учених, аспірантів і студентів

"Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті"

23–24 квітня 2018 р.

Частина 1

Київ НУХТ 2018

84 International scientific conference of young scientist and students "Youth scientific achievements to the 21st century nutrition problem solution", April 23-24, 2018. Book of abstract. Part 1. NUFT, Kyiv.

The publication contains materials of 84 International scientific conference of young scientists and students "Youth scientific achievements to the 21st century Nutrition problem solution".

It was considered the problems of improving existing and creating new energy and resource saving technologies for food production based on modern physical and chemical methods, the use of unconventional raw materials, modern technological and energy saving equipment, improve of efficiency of the enterprises, and also the students research work results for improve quality training of future professionals of the food industry.

The publication is intended for young scientists and researchers who are engaged in definite problems in the food science and industry.

Scientific Council of the National University of Food Technologies recommends the journal for printing. Minutes № 9, 29.03.2018

Матеріали 84 міжнародної наукової конференції молодих учених, аспірантів і студентів "Наукові здобутки молоді – вирішенню проблем харчування людства у XXI столітті", 23–24 квітня 2018 р. – К.: НУХТ, 2018 р. – Ч.1. – 518 с.

Видання містить матеріали 84 Міжнародної наукової конференції молодих учених, аспірантів і студентів.

Розглянуто проблеми удосконалення існуючих та створення нових енерго- та ресурсоощадних технологій для виробництва харчових продуктів на основі сучасних фізико-хімічних методів, використання нетрадиційної сировини, новітнього технологічного та енергозберігаючого обладнання, підвищення ефективності діяльності підприємств, а також результати науково-дослідних робіт студентів з метою підвищення якості підготовки майбутніх фахівців харчової промисловості.

Розраховано на молодих науковців і дослідників, які займаються означеними проблемами у харчовій науці та промисловості.

Рекомендовано вченою радою Національного університету харчових технологій. Протокол № 9 від 29 березня 2018 р.

42. Investigation of chemical and organoleptic composition of icewines from Eastern Europe

Ostapenko Viktoriia, Tkachenko Oksana
Odessa National Academy of Food Technologies, Odessa, Ukraine

Introduction. The purpose of research was to determine chemical and organoleptic composition of icewines from Eastern Europe. Limited data belonged to icewine profiles from different producers and countries is in scientific literature that increases the significance of current investigation.

Materials and methods. Determination of sugar and ethanol content, titrated (TA), volatile acids (VA) and pH of icewines produced from Riesling frozen in Moldavian wineries including Lion Gri (LG), Cricova Zevs (CZ), Kvint (K), from Blaufränkisch and Welschriesling in Chateau Topolcianky (BCT, WCT), from Gruner Veltliner of Vinarstvo Dolany (VD) - Slovakia, from Andre in Pavol Velic (PV) - The Czech Republic was conducted according to winemaking rules [1]. The determination of organoleptic peculiarities involving specification of aroma and taste descriptors were carried out consistent with requirements ISO 13299:2016 [2].

Results and discussion. The same concentration of sugar and TA was found in icewines from WCT and LG – 181 g/dm^3 and 9 g/dm^3 that are the highest among another wines. The icewine from BCT had lower sugariness by 3,5 and 4,6 g/dm^3 than from VD and PV averaging 178,5 and 179,6 g/dm^3 respectively. Moldavian companies CZ and K differed not significantly showed sugar concentrations 176,5 and 177,5 g/dm^3 that had the same content of TA – 8,4 g/dm^3. Icewines produced from VD and PV having identical concentration of TA 8,6 g/dm^3 were more by 0,6 g/dm^3 comparative to dessert wine from BCT. The concentration of VA is one of the main indicator in icewines amounted in investigated samples in average 1,23 g/dm^3, but the highest 1,44 g/dm^3 was found in wine from WCT. The content of ethanol was 10,6 %v/v including wines from BCT, CZ and K and 11,1 %v/v among samples from WCT, PV, LG. The pH level did not differ significantly between samples of wines and averaged 3,43.

According to results of organoleptic analysis the aromas of tropical fruits, honey, lemon, rye bread and cinnamon were characteristic of all samples. Moldavian samples differed more pronounced aromas of lollipops while Slovak - more fruit and notes of smoked meat. The notes of bread and duchess pear were characteristics of Czech icewine. Descriptors such as black berries and black pepper were identified in icewines from PV and BCT. Such indicator as the intensity of the color was observed similar among the samples, despite the varieties used in production: from yellow to amber. The icewines from Blaufränkisch and Andre had yellow colors with orange shades. This fact can be explained by the change in the color of the berries during long maturation, when the anthocyanins of the skin are represented mainly in polymeric forms, moving from the characteristic color of the grapes to more brown or dull.

Conclusions. Investigation showed the diversities in chemical and organoleptic composition of icewines from Eastern Europe that conclude each wine is unique complex of influence of grape variety, climate conditions and specification of technology.

References

1. Гержикова В.Г. Методы технохимического контроля в виноделии. - 2-е изд., перераб. и доп. — Симферополь: Таврида, 2009 - 304 с. — (Серия научно-технической литературы по виноделию).