Research results. Methanolic extracts of Onion peels and Cranberry fruits were analyzed in order to evaluate the efficacy of antioxidant determination using ABTS assays. In Onion peels extract four phenolic compounds –quercetin, kaempferol, chlorogenic and neochlorogenic acids were identified (Fig. 2). In Cranberry fruits extract also four phenolic compounds – gallic, chlorogenic, neochlorogenic and p-coumaric acids were identified (Fig. 1). Onion peels extract (11260,44 µg/g) was more active than Cranberry fruits extract (886, 80µg/g). The calculated Trolox equivalent antioxidant capacity values of biologically active compounds in Onion peels extract confirmed that quercetin was the predominant radical scavenger. Gallic acid was the predominant radical scavenger in Cranberry fruits extract.
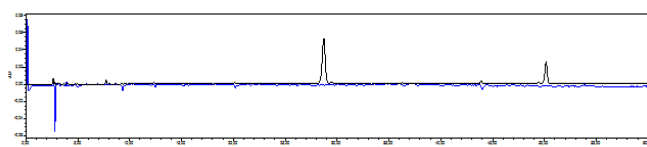

Fig 1. **Combined chromatograms of Cranberry fruits extract: chromatographic elution and post-column reaction with ABTS**
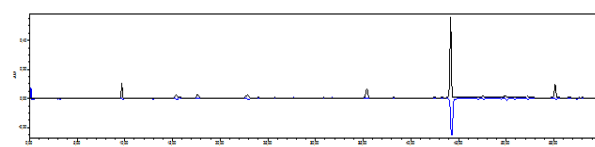
Fig 2. **Combined chromatograms of Onion peels extract: chromatographic elution and post-column reaction with ABTS**

Conclusions. The obtained results confirm the reliability of ABTS post-column assays for screening of antioxidants in complex mixtures and the determination of radical scavenging.

References

1. Manisha, Whidul Hasan 2017. Oxidative stress and antioxidants: an overview. International journal of advanced researches and review. 2(9): 110-119.

2. Raudonis R, Raudone L, Jakstas V, Janulis V. 2012. Comparative evaluation of post-column free radical scavenging and ferric reducing antioxidant power assays for screening of antioxidants in strawberries. J Chromatogr A. 1233:8–15.

STUDY OF THE DYNAMICS OF PROBLEMS IN THE DEVELOPMENT OF THE RETAIL SEGMENT OF THE PHARMACEUTICAL MARKET OF UKRAINE

H. L. Panfilova[1], I. A. Sokurenko[2]

[1]*Department of Organization and Economics of Pharmacy*

[2]*Department of Iindustrial pharmacy and economics, Institute of Pharmacy Professionals Qualification Improvement*

National University of Pharmacy, Kharkiv, Ukraine

panf-al@ukr.net

Objective. The pharmaceutical market (PM) is an important part of the system of pharmaceutical provision of the country. In modern conditions, the PM performs many functions, among which the social function is one of the most important.

Materials and methods. We conducted dynamics analysis of pharmacy sales development in retail sector of PM (2011-2018). That's why we used the data analytical research system ("PharmXplorer"/"Фармстандарт","Pharmstandard").

Results. As a result of studies we have found that during 2011-2018 the retail segment of Ukrainian PM had zigzag-shaped development dynamics. We distinguished three main stages of its development. So, during the first stage (2011-2013), we observed positive growth dynamics of pharmacy sales expressed in UAH, USD, and package pieces. What is more, increase of pharmacy sales' indicators, expressed in UAH and USD, did not differ significantly. The second, the most difficult, period lasted for two years (2014-2015). This period was characterized with decrease of sales' volume, expressed in USD and in natural indexes (package pieces). In 2015 the lowest indexes of pharmacy sales, expressed in USD (22.75 million USD), and in natural indexes (1507.1 million of package pieces), were observed. Increase (38.0%) of sales' volumes, expressed in UAH, which was observed in 2015, was due to devaluation of national currency. The third stage of PM development started in 2016 and is continuing still. In the retail segment an increase in volume of pharmacy sales, expressed in UAH – by 22.0%, in USD – by 4.0%, and in package pieces – by 6.0%, has been observed from 2016. In the conditions of relative stabilization of USD rate in 2017, growth of sales' volume in USD was 17.0%, and in natural indexes – only 5.0%. Gradual slowdown of one sale weighted average cost growth, beginning in 2016, is an important positive characteristic of pharmacy sales market development. For example, in 2015 this index grew by 41.0%, in 2016 – by 16.0%, and in 2017 – only by 10.0%. and in 2018 – only by 9.0%. Of special note is the fact of gradual increase of sales' volume per capita, expressed in USD. For example, in 2015 this index was 36.04, in 2016 – 37.24, and in 2017 – 44.09 USD.

Conclusions. Retail segment of Ukrainian PM, in the conditions of political and socio-economic crisis in the country, has shown the complex nature of its development.

RESULTS OF COMPARATIVE ANALYSIS OF INDICATORS OF «WILLINGNESS TO PAY» FOR USING INNOVATIVE TECHNOLOGIES IN HEALTH CARE IN THE COUNTRIES OF MEDIA ASIA AND UKRAINE

L. V. Tereshchenko, I. V. Zhirova
Department of Social pharmacy, Faculty of Pharmacy
National University of Pharmacy, Kharkiv, Ukraine
lyubov.ter2017@gmail.com