

## Medical uses of preparations from non-polar fragments of the *Nigella* species metabolites derived from its seeds

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**Background.** The widespread *Nigella* species (*sativa* and *damascene*) have been used in traditional medical practices since the ancient times. Their pharmacological action has a wide range as the compounds found in these species are highly active which allows for big opportunities as far as the uses of this medical herb are concerned. [1] Oil is a significant part of the extract from the seeds, which can be derived by different ways. [2, 3] The effect of the lipophilic compounds in complex therapies of various pathologies is scientifically proven and reviewed in the major scientific journals and articles.

**Objective.** Estimation of the perspectives for the pharmaceutical development of the non-polar fragments of *Nigella* species derived from its seeds.

**Methods.** Russian and foreign research results were reviewed to estimate the perspectives and opportunities for the pharmaceutical developments involving seeds of the *Nigella* species, in particular the research carried out by European and Asian scientists, because their works are more demonstrative due to the long-established traditions of using medical plants and availability of this particular species.

**Results.** The research carried out in 2002-2016, demonstrate that *Nigella* seeds have a high potential for further studying and use in the medical practice. At the same time, there is uncertainty in choosing the dosage form and choosing the way of administration of the substance. Moreover, the wide range of biologically active agents of different chemical nature and molecular structure suggest their individual ways of extraction and ways of purification. Fatty oils are the main part of the *Nigella* seeds and are derived from the plant by various ways in different studies, yet there is no data on safety and suitability for further medical uses of the derived pharmaceutical substances. Also, it is not clear which process of extraction and purification is the most convenient and optimal in both the technological and economic respect.

**Conclusion.** The above mentioned information demonstrates the necessity of further study of the characteristics of *Nigella* seeds, as well as of the implications for the technological processes of procuring new dosage forms, which are based on the non-polar compounds.

### Источники и литература

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