

## **Estimation of electrospun web quality by diameter uniformity**

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The web of electrospun nanofibres usually consists of different diameter nanofibres. The diameter of nanofibres usually differs and depends on various parameters [1]. The different finess of fibres influences the structure of the web and herewith the end-use properties of such kind of nanomaterials. In electrospinning, most of the attention is focused on producing web with a uniform structure. Uniformity of the structure is very important because the web of nanofibres have numerous applications in various fields such as filtration materials, biomedical applications and others. The goal of this work is to analyze the web of nanofibres and to evaluate the uniformity of the structure.

The mathematical analysis and comparison with well known statistical distributions showed that usually distributions of nanofibres diameter are very sophisticated and actually are compound one consisting from several normal distributions [2-4]. The total distribution can be divided in few parts accordance number of peaks of each distribution.

The quality of web of nanofibres is proposed to estimate by the average diameter and the modal diameters of each normal distribution with percentage value, i.e. how many measurements belong to this distribution. In this case it is possible to compare various investigations, especially when diameters of nanofibres are distributed differently.

### References

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