

# Education using museum instruments and apparatus in The Great Serbian Chemists' Collection

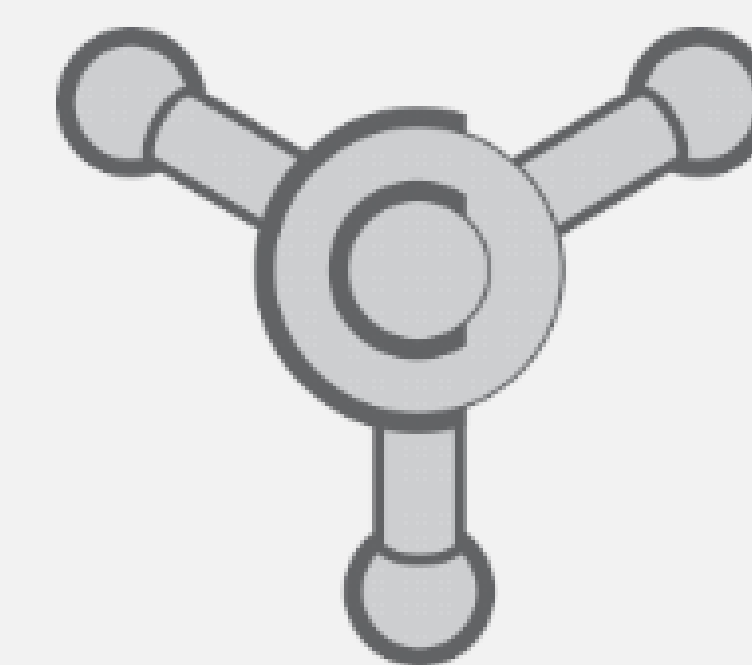
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## 1 Introduction

Scientific instruments and apparatus are noteworthy exhibits in museums. Other than showing evolution of technology in achieving lower limits of detection, these pieces are useful educational resources.

Development of specific instrument rarely drastically changes the principles of operation. Showing parts and techniques on old or broken pieces can help students to engage and understand newer scientific instruments.

## 2 Materials and methods

During exhibition on Science Festival 2018, a set of key pieces were showed.

Visitors found that the most interesting one were apparatus for continual bidistillation of water (1961, Glass Factory Pula, Croatia; Fig. 1) and pH meter (1940ties, O.M.A.P., Ottica Mecc. App. Di Precisione, Italy). [1]

## 3 Results and Discussion

The distillation apparatus was attractive to visitors and then used to explain the hydrological cycle in nature.

The most curious visitors had chance to learn about pH values in body and different house chemicals (Fig. 2). This seemed to be very important, because some visitors were convicted that human bodies are basic, according to pH scale.

## 4 Conclusion

These exhibits are relevant educational resources for education of elementary, high school and faculty students.

Science Festival exhibition showed that educating adults is also important. Adult visitors seemed not to be enough critically oriented towards magazine articles that claimed that human body pH was overall above 7.



**Fig 1.** Apparatus for continual bidistillation of water, also known as *Destilatron* before (a) and after primary conservation (b)



**Fig 2.** Detail of the exhibition at the Science Festival 2018 – Visitors and the one of the volunteers – *Destilatron* (b) and the pH meter (c)

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## References

[1] J. Korolija, I. Matijašević, D. Stojiljković, Z. Đorđević, *Laboratory of the Outstanding - The Heritage of Serbian Chemistry*. 2013, 22.

