

Today's programme

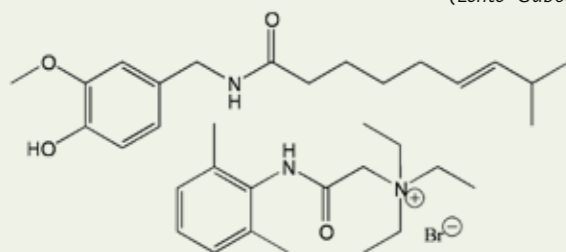
Students		Mentors and Scientific Observers		Guests	
06:00-07:00	Breakfast	06:45-08:15	Breakfast	06:45-08:15	Breakfast
07:00	Departure for ELTE University	07:30-08:30	Departure for Pannonhalma in two groups	07:30-08:30	Departure for Pannonhalma in two groups
09:00-14:00	Theoretical Exam	10:00-15:00	Visit to the abbey and the winery in two groups	10:00-15:00	Visit to the abbey and the winery in two groups
14:00-15:00	Lunch	11:30-14:30	Lunch in two groups	11:30-14:30	Lunch in two groups
15:00-17:15	Free time in Budapest	14:30-15:00	Departure for the hotel	14:30-15:00	Departure for the hotel
18:00-22:30	Reunion Party on Európa River Boat	18:00-22:30	Reunion Party on Európa River Boat	18:00-22:30	Reunion Party on Európa River Boat
22:30	Departure for Gödöllő				

Molecule of the day

Capsaicin and QX-314 are an odd couple of molecules. The former is the chemical that makes chili peppers spicy, whereas the latter is a seemingly useless local anaesthetic that cannot enter cells on its own because of the positive charge on one of the nitrogen atoms. However, when QX-314 was used together with a little bit of capsaicin in experiments involving rats, the result was pain inhibition without blocking any other senses. The spicy molecule opens up an ion channel, which lets the anaesthetic in to exert its effect only where it is needed most.

(Nature, 2007, 449, 607)

(Lente Gábor)



Useful expressions

I'm not nervous
There's totally no sense in this
Do you know the solution?
I can read your mind
I &@%\$-ed it up
Let's go see the...
Open/Closed
Can I try this on?
How much does it cost?
Can you give a discount?
He/She pays for me
Where did you get that?

Nem izgulok
Ennek nincs semmi értelme
Tudod a megoldást?
Olvasok a gondolataidban
El &@%\$-tam
Menjünk el megnézni a ...-t
Nyitva/Zárva
Felpróbálhatom?
Mennyibe kerül?
Tudná olcsóbban adni?
Ő fizet helyettem
Azt honnan szerezted?

You might be a chemist if...

- ...you think fresh air smells bad.
- ...you played with explosives as a kid and you still have all your fingers.
- ...you wash your hands BEFORE using the bathroom.

(collection of J. Verhagen)

Attention

Oláh Máté the guide of the team of the USA lost his grey Budmil wallet, if someones knows something about it please do not hesitate to tell him

Weather

The weather is getting better, at least it seems so. The temperature is indeed a bit higher and the sun seems to be shining, but remember: NEVER BELIEVE THE WEATHER-MAN!

Colophon

Catalyzer

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Catalyzer

Issue No. 7 – Thursday 17 July 2008

The shopping street

We have already had some sightseeing but you may have been waiting for a chance to explore the city by yourself and today, after the theoretical exam, Budapest will be all yours. The biggest shopping area in Pest can be found next to the riverside expanding out from the Great Market Hall at Fővám tér to Vörösmarty tér in a north-south direction. This pedestrian street is called Váci utca, so keep that name in mind. There are many open-air restaurants offering various traditional dishes or you may like to have a cappuccino in one of the elegant classical or extravagant modern cafés.

As to shopping facilities, all the international brands' stores are represented here and you might even find some discounts if you are lucky. If you are looking for some nice souvenirs you can find many vintage and folk handicraft stores selling pottery, hand-woven fabrics, embroidery, wood carvings and traditional Easter eggs. Close to the shopping district there are also good places for just hanging around: you might be interested in Ráday utca, Szabó

Ervin tér, Károly körút, Király utca and Liszt Ferenc tér.

The Market Hall (Vásárcsarnok) is an imposing classical building situated in Fővám tér. It has distinctly coloured bricks and a vividly patterned ceramic roof. Ground floor, left side: seasonal products (fruits, vegetables) right side: spices, confectionary, bakery, dairy products, rare fruits and vegetables. Basement: pickles, butcher's, oriental store. First floor: souvenir-store, mostly folk products.



Specific souvenirs ("Hungaricums")

Most material mementos of Hungary are connected with eating or drinking so let's see what the main courses for souvenirs are:

Hungary is at the northern frontier of the grape growing area of Europe. The leading wine brand is the world-famous Tokaji Aszú from the Tokaj region. This is a sweet wine made from "noble rotten" (late harvest) grapes. Besides wine, pálinka is also a popular choice. It is an old traditional

spirit distilled from fresh fruit (apricot, cherry, pear, plum, strawberry or wild fruits) with an alcohol content of at least 37.5%. This trademark has several restrictions in order to produce perfectly "official" drinks. Champion manufactures are: Bolyhos, Bestillo, Panyolai, Szicsek and Zsindelyes; some of them also sell organic jams from the same kinds of fruits.

Paprika, another speciality of Hungary, is a kind of red pepper which looks a bit like, but tastes very different from, chili. There are hot (erős) and delicate (édes) variants. They are used for many kinds of dishes which you can sample during your stay here. In souvenir shops you can find paprika powder in packages or dried paprika garlands.

If you stay in Hungary you must try some of the many kinds of Hungarian sausages. The no. 1 sausage is definitely Pick téliszalámi. The south-Hungarian brands (Gyulai, Csabai) are a good choice for the sausage fan, or in whole-food stores you can buy mangalica sausages. Mangalica is a rather hairy pig bred in a perfectly natural environment.

For those with a sweet tooth, marzipan may be a good choice. A famous trademark marzipan is Szamos. You can find almost any flavour and form you can think of, from plain blocks to bonbons stuffed with liqueur, chocolate or fruit. You must also try the previously mentioned Túró Rudi.





Re-union party

This evening we will be able to admire the picturesque view of Buda Castle (also a World heritage site), the Fishermen's Bastion, Margaret Island, the Chain Bridge etc. from the Danube, as the re-union party will be organised on the "Európa" river boat. As a river conference ship of this scale exists nowhere else on the continent, it will add a new, unique sparkle to the hospitality for which Hungary is deservedly famous. Having discussed chemistry enough with the mentors, you can relax and just enjoy the party!

(Kontsek András)

Looking back on the practical exam

Two days ago the students had to face the practical exam for which they had studied hard and prepared thoroughly. For my greatest surprise and astonishment books and notes could be seen in almost every hand even the very last day before the exam. According to the technicians who helped the students in the laboratory, it was a great experience to see talented young people from so many nations working together and competing with each other.

No wonder, thus, that the students



enjoyed this day a lot, since they finally had the chance to show how brilliant and well-prepared they are. But let's see their opinion about the practical exam.

USA

Q: The first part of the competition is already over so it is high time for me to ask you how you feel about it...

A: Well, our feelings are mixed and complex. On the whole, we can declare the tasks were way more difficult than those of the previous year. Maybe it is a because of the high level Hungarian education... As to the exercises, the first in which we had to acetylate α -D-glucose with acetyl-anhydride and then isomerize it to β -D-glucose was a piece of cake for us. The second one was a harder task. It was a titration exercise with which we finally could cope. The real hardships came with the third exercise, namely qualitative analysis of cations and anions together. The main problem with it was the shortness of time, I think, though I am not sure that I could have managed with it given we had at least three hours. In my opinion, it was too complex.

Bulgaria

Q: Let me ask you about your overall feelings concerning the practical part of the competition. Was it hard for you, did it match your expectations or was it something completely different from what you had been preparing for?

A: All I can say is that the exam was a really challenging but also an enjoyable one. The exercises were not much more

difficult than what we had previously expected. Actually the only negative thing that I can point out is that the time was a little bit too short.

Q: From among the three problems, did you have a favorite or did you have one that you especially disliked?

A: Dislike? Well, no. But I liked the third task very much. You know it was qualitative analysis and we had practiced it a lot in the chemistry classes at school, so it was particularly easy for us.



Cyprus

Q: How do you feel about the practical exam? On the whole did you find it difficult or was it easier than what you had expected?

A: This year's tasks were not very hard. The greatest advantage of them was that the equipment we had to use was simple and we did not have to work with difficult high-tech laboratory instruments as it happened last year.



Q: And what do you think about the results?

A: I know it is a competition still I do not think that the results are so important. We have come to participate, not to win. What matters is that we have a good time here and give the best of our knowledge, winning the competition is much less important for us.



Curiosity of the day

Various insects spend practically their entire life on water surface. They skate on the surface layer of water on their hydrophobic legs and capture other insect fallen into water. They in fact utilize the surface tension and stay afloat. Some species however apply additional trick: when

another insect threatens our hero it ejects surfactant which decreases the surface tension, hence the attacking insect would sink if it tried to approach the clever water skater. On the other hand the escaping victim gains additional speed from the edge of the spreading surfactant layer. What do you think, can these insects jump on the surface?



Did you know...

that 4 years ago within one day all the famous and – at least for Hungarians – quintessential paprika powder disappeared from each and every shelf of all the Hungarian shops, supermarkets and restaurants? Imagine Italy without pasta, the USA without hamburgers, Japan without raw fish or Bohemia without beer – that was Hungary without our beloved paprika! No goulash stew, no chicken paprika, no fish-soup, no red spicy sausages, no life! Hungary was paralyzed! The reason was that some imported paprika powder contained a poisonous substance, aflatoxin, produced by a fungus. This paprika had been mixed with the original, unique Hungarian paprika powder and the hybrid arrived at the distributors. Later the total ban was revoked, but we still remember the hard times in those days. Hungarians in fact are so devoted to paprika that they often use it for serious research. Take for instance Mr. Szent-Györgyi Albert as an example. He was interested in the chemistry of cellular respiration. He identified L-ascorbic acid as a key element in these processes. Nowadays we know this compound as vitamin C. For his isolation experiments he used a huge amount of paprika as the source of vitamin C. The successful use of this supply of paprika landed him in Stockholm for the 1937 Nobel Prize in Medicine. So it is a good occasion for you to taste paprika while you are here, in Hungary!

(Stirling András)