

ANALYTICAL METHODS in CHEMICAL ECOLOGY

a post graduate course (doktorandkurs)

when: February 7 - 25, 2011

where: Chemical Ecology, Plant Protection Biology,
Swedish University of Agriculture (SLU), Alnarp

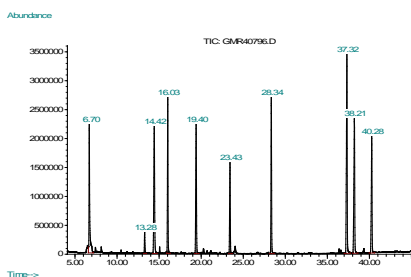
students: maximum 18 participants

course fee: SEK 3.000:-

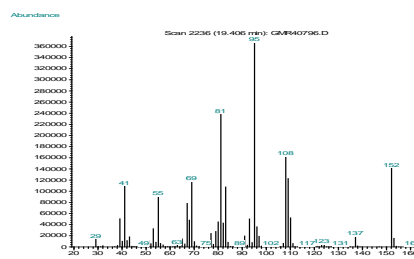
This 4½ ECTS course is an introduction to modern analytical methods used in Chemical Ecological and Ecotoxicological research, such as:

- methods for sampling organic compounds
- understanding chromatography; both gas chromatography and liquid chromatography
- how to choose an analytical column, and why ...
- different methods for identification of organic compounds
- methods for quantification, and the reliability of quantitative analysis

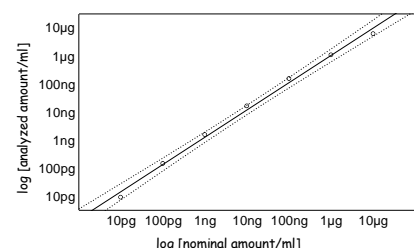
The course will also include a practical part: volatile collection, sample preparation, GC-MS analysis, and evaluation, using the analytical instrumentation at Chemical Ecology, Plant Protection Biology, Swedish University of Agriculture (SLU), Alnarp



separation



identification



quantification



MOST WELCOME!!!!

/Göran Birgersson
course leader



Insect Chemical Ecology
Ethology and Evolution

postgraduate course: ANALYTICAL METHODS IN CHEMICAL ECOLOGY – winter 2011

week	February	am = 09.15 – 12.00 – lectures		pm = 13.00 – 17.00 – lab work	
4	Monday 7	introduction for new co-workers: lab routines, safety regulations, etc		practically & safety in the lab ... grp. A	
	Tuesday 8	Chem.Ecol. seminar	introd. to Analytical Methods in Chemical Ecology	practically & safety in the lab ... grp. B	
	Wednesday 9	collection methods: analysis in general, aeration / adsorbents ...		group 1: make adsorb. column & aeration	see detailed schedule below
	Thursday 10	collection methods (continued), gas chromatography		group 2: make adsorb. column & aeration	introduction to:
	Friday 11	gas chromatography (continued) – chromatography in general		group 3: make adsorb. column & aeration	wind tunnel
5	Monday 14	liquid chromatography (HPLC)		group 1: extraction & start of GC-MS	EAG & GC-EAD
	Tuesday 15	identification: Kováts index, FTIR, UV-Vis		group 2: extraction & start of GC-MS	SSR/SCR & GC-SSR
	Wednesday 16	mass spectrometry		group 3: extraction & start of GC-MS	Patch clamp
	Thursday 17	mass spectrometry (continued)		group 1: processing GC-MS data	Optical Imaging
	Friday 18	alternative massspectrometric methods, quantitative analysis		group 2: processing GC-MS data	see detailed schedule below
6	Monday 21	introduction to mass spectrometric analysis		group 3: processing GC-MS data	
	Tuesday 22	Chem.Ecol. seminar	mass spectrometric analysis (continued)	group 1: interpretation of MS data	
	Wednesday 23	mass spectrometric analysis (continued)		group 2: interpretation of MS data	
	Thursday 24	mass spectrometric analysis (continued) / spare time – questions		group 3: interpretation of MS data	
	Friday 25	results from laboratory work – discussion; course evaluation		"olfaction in the daily life ..."	

lectures in Articum 4

lab.work in chemistry lab or the small seminar room "Akvariet".

postgraduate course: ANALYTICAL METHODS IN CHEMICAL ECOLOGY – winter 2011

week	February	pm = 13.00 – 17.00 – lab work		
4	Monday 7	group A: practically & safety in the lab		
	Tuesday 8	group 1: introduction to wind tunnel		group B: practically & safety in the lab
	Wednesday 9	group 1: make adsorption columns, aeration	group 2: introduction to wind tunnel	group 3: introduction to EAG & GC-EAD
	Thursday 10	group 1: introduction to EAG & GC-EAD	group 2: make adsorption columns, aeration	group 3: introduction to wind tunnel
	Friday 11	group 1: introduction to SSR/SCR & GC-SSR	group 2: introduction to EAG & GC-EAD	group 3: make adsorption columns
5	Monday 14	group 1: extraction & GC-MS	group 2: introduction to SSR/SCR & GC-SSR	group 3: start aeration
	Tuesday 15	group 1: introduction to Patch Clamp & GC-PC	group 2: extraction & GC-MS	group 3: introduction to SSR/SCR & GC-SSR
	Wednesday 16	group 1: introduction to Optical Imaging	group 2: introduction to Patch Clamp & GC-PC	group 3: extraction & GC-MS
	Thursday 17	group 1: processing GC-MS data	group 2: introduction to Optical Imaging	group 3: introduction to Patch Clamp & GC-PC
	Friday 18	group 1: work on lab report	group 2: processing GC-MS data	group 3: introduction to Optical Imaging
6	Monday 21	group 1: work on lab report	group 2: work on lab report	group 3: processing GC-MS data
	Tuesday 22	group 1: interpretation of MS data	group 2: work on lab report	group 3: work on lab report
	Wednesday 23	group 1: work on lab report	group 2: interpretation of MS data	group 3: work on lab report
	Thursday 24	group 1: work on lab report	group 2: work on lab report	group 3: interpretation of MS data
	Friday 25	"olfaction in the daily life ..."		