

REACTION KINETICS IN FOOD SCIENCE

**9th Edition of an International Advanced Course organized by the
Graduate School VLAG**

Course leader: Prof. dr. Tiny van Boekel



May 9 – 14, 2016, Wageningen, The Netherlands

**VLAG International Advanced Course
Reaction Kinetics in Food Science, 9th Edition
May 9 - 14, 2016**

Contents of the Binder

Program of the course/List of participants

- 1. Introduction to the course & Models and Modelling**
Tiny van Boekel
- 2. General principles of Chemical Kinetics and Transition State Theory**
Broniek Wedzicha
- 3. Kinetics and Statistics**
Tiny van Boekel
- 4. Kinetics of microbial growth**
Heidy den Besten
- 5. Food: a complex reaction medium**
Broniek Wedzicha
- 6. Multiresponse modelling**
Tiny van Boekel
- 7. Modelling a complex reaction: Maillard browning & acrylamide formation**
Broniek Wedzicha
- 8. Kinetics of microbial inactivation**
Tiny van Boekel
- 9. Enzyme kinetics and kinetics of enzyme inactivation**
Tiny van Boekel
- 10. Kinetics of shelf life modeling**
Tiny van Boekel
- 11. Kinetics and Athena Visual Studio**
Michael Caracotsios
- 12. Computer exercises**

PROGRAM VLAG International Advanced Course
Reaction Kinetics in Food Science, 9th Edition
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Monday May 9			Orion (103)
8.30-9.00	Registration		C3034
9.00-10.30	Introduction to the Course; Models and Modelling	Tiny van Boekel	
10.30-10.45	Coffee/tea break		
10.45-12.30	Reaction Kinetics: general principles	Bronek Wedzicha	
12.30-13.30	Lunch		
13.30-15.00	Statistics and Kinetics: a perfect marriage!	Tiny van Boekel	
15.00-15.15	Coffee/tea break		
15.15-17.00	Computer exercises		PC4051
Tuesday May 10			Orion (103)
8.30-10.00	Kinetics of microbial growth part 1	Heidy den Besten	C3020
10.00-10.15	Coffee/tea break		
10.15-11.15	Kinetics of microbial growth part 2	Heidy den Besten	
11.15-12.30	Computer exercises		PC4051
12.30-13.30	Lunch		
13.30-14.30	Food: a complex reaction medium	Bronek Wedzicha	C3030
14.30-15.15	Multiresponse modelling	Tiny van Boekel	
15.15-15.30	Coffee/tea break		
15.30-17.00	Computer exercises		PC4051
Wednesday May 11			Orion (103)
8.30-10.30	Modelling a complex reaction: Maillard reaction	Bronek Wedzicha	C3020
10.30-10.45	Coffee break		
10.45-12.30	Computer exercises		PC4051
12.30-13.30	Lunch		
13.30-14.30	Enzyme Kinetics and enzyme inactivation	Tiny van Boekel	C3020
14.30-15.15	Kinetics of microbial inactivation	Tiny van Boekel	
15.15-15.30	Coffee break		
15.30-17.00	Computer exercises		PC4051
19.00-22.00h	Dinner		
Thursday May 12			Axis-Z (118)
8.30-9.30	Kinetics of shelf life modelling	Tiny van Boekel	C0059
9.30-17.00h	Introduction to Athena Visual Studio	Michael Caracotsios	
(10-10.15 break,	Kinetic Modelling using Athena		PC0054
12.30-13.30 lunch	Parameter estimation using Athena		
(15.15-15.30 break)			
Friday May 13			Axis-Z (118)
8.30-17.00h	Continuation of Kinetic Modelling and parameter estimation using Athena	Michael Caracotsios	PC0054
Saturday May 14			Axis-Z (118)
8.30-12.30h	Continuation of Kinetic Modelling and parameter estimation using Athena		PC0054
10-10.15 break		Michael Caracotsios	
12.30 lunch	Concluding remarks		
	Closing at noon		