Course objectives
All PharmaTraining courses focus on two key objectives. These are to provide attendees with knowledge—information, which will assist you in making better judgements—and skills, which will allow you to apply the knowledge you have received. We guarantee to engage your interest and commitment on the course, and we expect our training to improve your effectiveness.

About this course
Effervescent products present particular problems in manufacture, which result from their special requirements and particular utility. In this one day workshop led by two leading experts, the issues surrounding the development and manufacture of effervescent products are explored in depth including practical sessions.

Background
· What are the advantages and disadvantages of effervescent tablets?
· What are their particular requirements?
· Why do they present problems?

Course Speakers
Dr Michael Gamlen is Managing Director of Pharmaceutical Development Services Ltd, a pharmaceutical consultancy based in Nottingham (UK). Dr Gamlen has over 30 years experience of tablet development. Awarded a First Class Honours degree in Pharmacy, specialising in Pharmaceutical Engineering, he studied for a PhD at Nottingham University. He was Head of Tablet Development at the Wellcome Foundation for 15 years, and worked as an outsourcing manager before starting his consultancy business in 2000. Dr Gamlen specialises in managing product development, formulation, tablet and process development studies. He has been teaching professional tabletting courses for many years and his courses are highly rated, exceeding the expectation of the participants in many cases.

Michael continually updates the content of his courses with the latest guidance and extracts of up-to-the minute scientific papers. He provides a substantial body of relevant literature to all course participants as well as copies of all notes and guidance used and a workbook. He is a popular and highly respected presenter.

Paul Butler is an extremely experienced trainer, tablet manufacturing expert and consultant. During the past 20 years, he has been involved as a senior consultant for many projects in the pharmaceutical industry throughout the UK, Ireland, Europe, Africa, the Middle and Far East, and Australia.

He has been advising and training people in a broad range of manufacturing areas for many years. He focuses on providing small groups of interested people with his extensive experience in a small groups, hands-on setting.
Who should attend
The course is designed for people working in formulation, process development or manufacturing with responsibility for the development, validation and manufacture of effervescent products. The content will complement that of the Tablet Formulation and Tablet Process Development courses which immediately precede it.

Course Programme

Try it!! The workshop...
Using a laboratory tablet machine and some simple equipment, we experiment with effervescence and develop some simple products.

Theory
- Effervescence systems. What are they and how to they achieve their objectives
- Uniformity – achieving and assessing uniformity in effervescent systems.
- Taste and taste masking
- ODTs
- Specific problems with effervescent products—mixing, lubrication, compression.

Practice. Effervescent products in Production.
- Engineering requirements for effervescent products
- Process Validation—challenges and pitfalls
- Scale up and Technology Transfer—mixing issues
- Routine manufacture

Bring your problems don’t leave them at work!
There will be plenty of opportunity to discuss specific problems, in confidence if required.

Additional Resources
Online access to comprehensive publications including all relevant guidance will be provided as well as colour copies of all presentations and case studies.
Venue

Course fee includes all course materials, refreshments, lunch and course dinner or social activity, accommodation is not included.

Accommodation and travel directions are available on our website www.pharma-training-courses.com

COURSE PROGRAMME 2012

GMP Auditor Training 14 & 15 May 2012
How to Audit API Manufacturers 16 May 2012
Pre-formulation Studies for Tablet Development 21 & 22 June 2012
Tablet Formulation Development 25 & 26 June 2012
Hands-on Tablet Development including Pre-formulation, Formulation and Process Development 4,5 & 6 July 2012
Technology Transfer 2, 3 & 4 July 2012
Hands-on Tablet Development including Pre-formulation, Formulation and Process Development 4,5 & 6 July 2012
Tablet Process Development, validation and the application of QbD 9, 10 & 11 July
Quantitative Bioanalysis using LC/MS for Pharma 25 & 26 September
Hands-on Tablet Development including Pre-formulation, Formulation and Process Development 26, 27 & 28 September 2012
OOS Investigations in a GMP Environment 23 & 24 October 2012
QbD and Lifecycle Management for Analytical Methods 25 & 26 October
Stability Testing in Pharmaceutical Development and Manufacture 21 & 22 November
Pharmaceutical Packaging - an introductory course 23 November 2012
Introduction to Sterile Product Manufacturing for Junior Staff and New Staff 28 & 29 November 2012
Introduction to Sterile Product Manufacturing for those with a cGMP basic understanding 3 & 4 December 2012
Pre-formulation Studies for Tablet Development 29 & 30 November 2012
Tablet Formulation Development 3, 4 & 5 December 2012
Technology Transfer 5, 6 & 7 December 2012
Tablet Process Development 11, 12 & 13 December 2012
Development and Manufacture of Effervescent Tablets 14 December 2012
Oral Solid Dosage Manufacturing Technology 14 December 2012

For 5 or more staff requiring training it may be beneficial to run a course in-house.

The benefits of running a course in-house:
• Up to 70% savings on delegate fees
• Save on travel or accommodation costs
• Customised content to meet your requirements
• Big print savings on course material - especially with larger groups
• Courses arranged for large groups up to 24 staff
• Tutorials available for small groups of 2 or 3 staff
• Meet course speakers in advance to discuss design and content

Contact Judy Callanan at any time to discuss
Ph: 0044 20 7193 7703, Fax: 0044 20 7681 3582
Email: judy@pharma-training-courses.com

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# REGISTRATION DETAILS:

<table>
<thead>
<tr>
<th>Development and manufacture of effervescent tablets: 14 December 2012</th>
<th>Full Fee: 1 day course £610.00 (+ VAT £122.00 if applicable - please see VAT NOTES)</th>
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<tr>
<td>Development and manufacture of effervescent tablets: 14 December 2012</td>
<td>Early-bird Fee: 1 day course £549.00 (+ VAT £109.00 if applicable - please see VAT NOTES) if booked and paid by 19 October 2012</td>
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<tr>
<td>Reduced rate if also booking Tablet Process Development, Validation and the application of QbD:</td>
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## VAT NOTES:

- **UK:** Under UK law all UK-based applications are subject to VAT at the prevailing rate however most UK VAT registered companies/organisations can reclaim this tax.
- **EU:** With effect from 1 January 2011 applications from delegates whose companies are based in EU countries will not be subject to VAT *PROVIDED THAT* valid VAT ID details are provided at the time of booking, otherwise VAT will be charged.
- **OTHER:** With effect from 1 January 2011 applications from delegates whose companies are based outside of the UK/EU will be outside the scope of VAT, ie no VAT is charged or payable.

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<th>Discount of 10% applies for booking 8 weeks in advance</th>
<th>Discount of 10% applies for booking more than 1 delegate</th>
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</table>
| Discount of 10% applies for booking more than 1 course | *Maximum discount received is 15%*

## Methods of Payment available:

- [ ] Cheque (Please make payable to PharmaTraining Ltd )
- [ ] Bank transfer
- [ ] Credit/Debit Card (If paying by Credit Card please register online)

Please register online on our website: www.pharma-training-courses.com

## Data Protection

PharmaTraining Ltd gathers personal data in accordance with the UK Data Protection Act 1998 and we may use this to contact you by telephone, fax, post or email to tell you about other products and services. If you have any queries or want to update any of the data that we hold then please contact us.

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**Terms and Conditions: Delegate fees:** Fees for this programme are shown above.

Delegate fees are inclusive of course documentation, refreshments and lunch. Payment of the registration fee must be paid within 14 days of commencement of the course. Upon receipt of payment, a proof of payment will be sent to you. **Cancellation Policy:** Full refunds less a handling fee of £100 will be made for cancellations received in writing within 28 days of the commencement of the course. Refunds of 50% will be made for cancellations received in writing between 28 and 7 days prior to the commencement of the course. Regrettably no refunds will be made after 7 days prior to commencement of the course. Substitutions can be made at any time. **Liability:** PharmaTraining Ltd reserves the right to change the programme, speakers, date or venue without notice or cancel the event. If cancellation occurs delegates will be notified as soon as possible and will receive full refund of fees paid. PharmaTraining Ltd will not be responsible for any airfare, accommodation or other travel costs incurred.

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