

# POSTER TIMETABLE

## Day 1 – Wednesday 26<sup>th</sup> June (Main hall)

Poster number	Poster Topic	Presenters	Group
1 (paper 70)	Spray zone demarcation in top-spray fluidised bed granulation by droplet detection methods	M. Börner E. Tsotsas	Otto-von-Guericke University, Magdeburg, Germany
2 (paper 71)	Transfer of batch fluid bed granulation to a continuous process – Case study	K. Germer <sup>1</sup> M. Jacob <sup>2</sup> M. Zenker <sup>2</sup> G. Eckardt <sup>3</sup> B. Wolf <sup>4</sup>	<sup>1</sup> Salutas Pharma GmbH, Germany <sup>2</sup> Glatt Ingenieurtechnik GmbH, Germany <sup>3</sup> Parsum GmbH, Germany <sup>4</sup> Anhalt University of Applied Sciences, Bernburg, Germany
3 (paper 72)	Comparison between granules produced by spray drying and dry granulation for the fabrication of ceramic porcelain tiles	F.G. Melchiades <sup>1</sup> L.R. Santos <sup>1,2</sup> S. Natri <sup>1</sup> A.O. Boschi <sup>1,2</sup>	<sup>1</sup> Dept. de Eng. de Materiais, Universidade Federal de São Carlos, Brazil <sup>2</sup> Programa de Pós-Graduação em Ciência e Engenharia de Materiais, Universidade Federal de São Carlos, Brazil
4 (paper 73)	Use of reactive wetting as a tool for real-time monitoring of binder distribution during granulation	D. Smrčka M. Schöngut F. Štěpánek	Institute of Chemical Technology Prague, Czech Republic
5 (paper 74)	The rheology of dense granular flows in a disc impeller high shear granulator	M. Khalilitehrani P.J. Abrahamsson A. Rasmuson	Chalmers University of Technology, Gothenburg, Sweden
6 (paper 75)	Upgrading the crush strength of ammonium nitrate prills by coating with limestone or dolomite powder	I. Klimova <sup>1</sup> V. Mikli <sup>2</sup> T. Kaljuvee <sup>1</sup>	<sup>1</sup> Tallinn University of Technology, Laboratory of Inorganic Materials, Estonia <sup>2</sup> Tallinn University of Technology, Centre of Materials Research, Estonia
7 (paper 76)	Effect of impeller design on product homogeneity in high shear wet granulation	Z.M. Mirza <sup>1</sup> C. Mangwandi <sup>1</sup> G.M. Walker <sup>1,2</sup>	<sup>1</sup> Queen's University Belfast, Northern Ireland, UK <sup>2</sup> University of Limerick, Ireland
8 (paper 77)	Fluidized bed micro-encapsulation of probiotic microorganisms for animal feeding	V. Oehl S. Wöltje H. Falck	Neuhaus Neotec GmbH, Ganderkesee, Germany
9 (paper 78)	Analysis of the effect of impeller type and speed on the rate and quality of mixing in a high shear mixer	D. Barling <sup>1,2</sup> T. Leadbeater <sup>3</sup> A. Ingram <sup>4</sup> D.A.V. Morton <sup>2</sup> J.P.K. Seville <sup>5</sup> K. Hapgood <sup>1</sup>	<sup>1</sup> Monash University, Australia <sup>2</sup> Monash Institute of Pharmaceutical Sciences, Australia <sup>3</sup> School of Physics and Astronomy, University of Birmingham, U.K. <sup>4</sup> Department of Chemical Engineering, University of Birmingham, U.K. <sup>5</sup> University of Surrey, U.K.
10 (paper 79)	Influence of viscous forces on collision dynamics in a fluidised bed granulator: A DEM-CFD study	L. Fries <sup>1</sup> S. Antonyuk <sup>2</sup> S. Heinrich <sup>2</sup> G. Niederreiter <sup>1</sup> S. Palzer <sup>1</sup>	<sup>1</sup> Nestlé Research Center Lausanne, Switzerland <sup>2</sup> Hamburg University of Technology, Germany

Poster number	Poster Topic	Presenters	Group
11 (paper 80)	Glass transition temperature effects on the breakage and dissolution of single amorphous food particles	W.R. Mitchell <sup>1</sup> C.I. Haider <sup>1</sup> B. Onasile <sup>1</sup> T.O. Althaus <sup>2</sup> L. Forny <sup>3</sup> G. Niederreiter <sup>4</sup> S. Palzer <sup>4</sup> , M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> Nestlé Product Technology Center York, UK <sup>3</sup> Nestlé Research Center, Lausanne Switzerland <sup>4</sup> Nestlé SA Headquarters, Vevey, Switzerland
12 (paper 81)	Experimental and numerical investigations of a spout fluidized bed with draft plates	V.S. Sutkar <sup>1</sup> N.G. Deen <sup>1</sup> V. Salikov <sup>2</sup> S. Antonyuk <sup>2</sup> S. Heinrich <sup>2</sup> J.A.M. Kuipers <sup>1</sup>	<sup>1</sup> Eindhoven University of Technology, The Netherlands <sup>2</sup> Hamburg University of Technology, Germany
13 (paper 82)	Granulation of indomethacin and hydrophilic carrier by fluidized hot melt method: The drug solubility enhancement	T.C. Andrade R.M. Martins L.A P. Freitas	Universidade de São Paulo, Brazil
14 (paper 83)	Continuum modeling of particle flows in high shear granulation	P.J. Abrahamsson <sup>1</sup> M. Khalilitehrani <sup>1</sup> S. Sasic <sup>2</sup> A. Rasmuson <sup>1</sup>	<sup>1</sup> Department of Chemical Engineering, Chalmers University of Technology, Göteborg, Sweden <sup>2</sup> Department of Applied Mechanics: Division of Fluid Dynamics, Chalmers University of Technology, Göteborg, Sweden
15 (paper 84)	Improvement of enalapril maleate chemical stability by high shear melting granulation	A.P.M. Oliveira <sup>1</sup> T.A. Cunha <sup>1</sup> R.C. Serpa <sup>1</sup> S.F. Taveira <sup>1</sup> E.M. Lima <sup>1</sup> L.A.P. Freitas <sup>2</sup> R.N. Marreto <sup>1</sup>	<sup>1</sup> Federal University of Goiás, Goiânia, Brazil <sup>2</sup> University of São Paulo, Brazil
16 (paper 85)	Effect of type of lactose and microcrystalline cellulose combination on recompaction	J. Langridge E. Camelot-Nijman R. Shegokar H. van Duinen M. Lindner	DFE Pharma, Goch, Germany
17 (paper 86)	Wettability study of glass beads bed by capillary rise with pressure increase	M. Benali K. Saleh	Université de Technologie de Compiègne, France
18 (paper 87)	Measuring caking degree in cocoa powders: A material science approach	E. Chávez Montes V. Girard J-C Gummy	Nestlé PTC Orbe, Switzerland
19 (paper 88)	Comparison of the effect of ultrasound and an electronic anti fouling system on the aggregation and scaling behaviour of calcium carbonate by an inline technique	W.N. Al Nasser <sup>1</sup> K. Pitt <sup>2</sup> F.H. Al Salhi <sup>1</sup> A.M. Al Mofleh <sup>1</sup> M.J. Hounslow <sup>2</sup> A.D. Salman <sup>2</sup>	<sup>1</sup> Saudi Aramco, Dhahran, Saudi Arabia <sup>2</sup> University of Sheffield, UK
20 (paper 89)	Blade - granule bed stress in a cylindrical high shear granulator: Further characterisation with DEM	E.L. Chan <sup>1</sup> G.K. Reynolds <sup>2</sup> B. Gururajan <sup>3</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> AstraZeneca, Macclesfield, Cheshire, UK <sup>3</sup> AstraZeneca R&D, Mölndal, Sweden

Poster number	Poster Topic	Presenters	Group
21 (paper 90)	The influence of the pan pelletizer rotational speed and the binder concentration on the agglomeration of alumina oxide granules	Z. Radeva A. Hameed P. Müller J. Tomas	Otto von Guericke University, Magdeburg, Germany
22 (paper 91)	Improved control of granule properties via "steady state" granulation	R.F.T. Moo C. Selomulya K.P. Hapgood	Monash University, Australia
23 (paper 92)	Study of soy protein isolate agglomeration in a pulsed fluidized bed using gum arabic as binder agent	V.G. Machado T.A.M. Hirata F.C. Menegalli	University of Campinas - SP, Brazil
24 (paper 93)	Optimizing the properties of blend for hard gelatin capsules filling by incorporating roller compaction in manufacturing process	D. Majerová <sup>1</sup> M. Bartáková <sup>1</sup> D. Hofmanová <sup>1</sup> T. Rysl <sup>2</sup> F. Štěpánek <sup>1</sup> P. Zámotný <sup>1</sup>	<sup>1</sup> Institute of Chemical Technology, Prague, Czech Republic <sup>2</sup> Zentiva k.s. (a Sanofi company), Prague, Czech Republic
25 (paper 94)	Effect of raw material properties on the kinetics of iron ores granulation	R.A. Jaimes <sup>1</sup> F. Van Loo <sup>1</sup> J-F Douce <sup>2</sup> M. Schöngut <sup>3</sup> M. Evrard <sup>4</sup> F. Štěpánek <sup>3</sup> E. Pirard <sup>4</sup>	<sup>1</sup> Centre for Research in Metallurgy, Liège, Belgium <sup>2</sup> ArcelorMittal Ironmaking, Global R&D   Maizières Process, France <sup>3</sup> Institute of Chemical Technology Prague, Czech Republic <sup>4</sup> University of Liège, Belgium
26 (paper 95)	Twin screw granulator: Effect of primary particle size	R.B. Al-Asady M.J. Hounslow A.D. Salman	University of Sheffield, UK
27 (paper 96)	Evaluating the solid surface free energy of amorphous maltodextrin	M. Balashanmugam C.I. Haider M.J. Hounslow A.D. Salman	University of Sheffield, UK
28	A "unit cell" approach for extracting macroscopic coalescence and breakage kernels from DEM simulations	N.J. Davis <sup>1</sup> C. Wassgren <sup>2</sup> J. Litster <sup>1,3</sup>	<sup>1</sup> Department of Chemical Engineering, Purdue University, USA <sup>2</sup> Department of Mechanical Engineering, Purdue University, USA <sup>3</sup> Department of Industrial and Physical Pharmacy, Purdue University, USA
29	Investigation of the effect of Mg silicate addition on the powder physical properties of compacted metformin-HCl	I.S. Rashid <sup>1</sup> K.A. Alkhamis <sup>2</sup> H.A. Hassan <sup>1</sup> T.H. Altalafha <sup>1</sup> A.A. Badwan <sup>1</sup>	<sup>1</sup> The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan <sup>2</sup> Jordan University of Science and Technology, Irbid, 22110, Jordan
30	DEM simulation of contact interactions of micrometer-sized particles	S. Kozhar <sup>1</sup> S. Antonyuk <sup>1</sup> S. Heinrich <sup>1</sup> L. Gilson <sup>2</sup> U. Bröckel <sup>2</sup>	<sup>1</sup> Hamburg University of Technology, Germany <sup>2</sup> Institute for Micro-Process-Engineering and Particle Technology, Birkenfeld, Germany
31	Envisioning the factory of the future: Case study on continuous granulation and tableting	K. Schoeters	GEA Pharma Systems, Wommelgem, Belgium
32	One step fluidized bed drying and encapsulation of a herbal extract	L. Benelli C.R.F. Souza W.P. Oliveira	University of São Paulo, Brazil

Poster number	Poster Topic	Presenters	Group
33	Roller compaction/ comparison of ribbon and granule properties using different types of lactose	C.S. Omar <sup>1</sup> J.D. Osborne <sup>1</sup> T. Althaus <sup>2</sup> S. Palzer <sup>2</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> Nestlé Product Technology Centre York, UK
34	A quality by design approach to investigate the effect of mannitol and dicalcium phosphate qualities on roll compaction	N. Souihi <sup>1,2</sup> M. Dumarey <sup>1</sup> H. Wikström <sup>3</sup> P. Tajarobi <sup>3</sup> M. Fransson <sup>3</sup> O. Svensson <sup>3</sup> M. Josefson <sup>3</sup> J. Trygg <sup>1</sup>	<sup>1</sup> Department of Chemistry, Umeå University, Sweden <sup>2</sup> Industrial Doctoral School, Umeå University, Sweden <sup>3</sup> AstraZeneca R&D Mölndal, Sweden
35	Powder flow characterisation of pharmaceutical excipients: evaluation of different techniques	N. Sandler <sup>1</sup> B. Gururajan <sup>2</sup> H. Ehlers <sup>1</sup> M. Fransson <sup>2</sup> L. Johnson <sup>2</sup> P. Tajarobi <sup>2</sup>	<sup>1</sup> Åbo Akademi University, Finland <sup>2</sup> AstraZeneca R&D, Mölndal, Sweden
36	In-line measurement of the agglomerate size distribution in fluidized bed agglomeration	C. Aviles-Aviles <sup>1,2,3</sup> M. Terray <sup>4</sup> E. Dumoulin <sup>1,2,3</sup> C. Turchiuli <sup>1,2,3</sup>	<sup>1</sup> AgroParisTech, Massy, France <sup>2</sup> INRA, Massy, France <sup>3</sup> CNAM, Massy, France <sup>4</sup> Malvern Instruments SA, France
37	A combined experimental and modelling investigation of the impact of powder properties	C.A. Kastner G.P.E. Brownbridge S. Mosbach M. Kraft	University of Cambridge, United Kingdom
38	A validated flowsheeting tool for the study of industrial granulation processes	I.M. Cotabarren D.E. Bertín V. Bucalá J. Piña	Universidad Nacional del Sur, Bahía Blanca, Argentina
39	Discrete Element Modelling of elastic bending of ceramic-polymer beams generated by spouted bed spray granulation	M.F.H. Wolff <sup>1</sup> V. Salikov <sup>1</sup> S. Antonyuk <sup>1</sup> S. Heinrich <sup>1</sup> G.A. Schneider <sup>2</sup>	<sup>1</sup> Institute of Solids Process Engineering and Particle Technology, Hamburg, Germany <sup>2</sup> Institute of Advanced Ceramics, Hamburg, Germany
40	Movement of secondary immiscible liquid into a suspension of hydrophilic particles in a continuous hydrophobic phase	S.F. Islam <sup>1</sup> S. Whitehouse <sup>2</sup> R. Sundara <sup>2</sup> T.O. Althaus <sup>2</sup> S. Palzer <sup>3</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> Nestlé Product Technology Centre, York, UK <sup>3</sup> Nestlé SA Headquarters, Vevey, Switzerland
41	A novel non-intrusive particle tracking measurement technique for dense granular flows	J. Neuwirth <sup>1</sup> S. Heinrich <sup>1</sup> M. Jacob <sup>2</sup>	<sup>1</sup> Hamburg University of Technology, Germany <sup>2</sup> Glatt Ingenieurtechnik GmbH, Germany
42	Textural analysis of the surface of a bed of powder as a tool to investigate agglomeration mechanisms	C. Codemo <sup>1</sup> R. Artoni <sup>2</sup> N. Realdon <sup>1</sup> E. Franceschinis <sup>1</sup> A.C. Santomaso <sup>2</sup>	<sup>1</sup> Dept. of Pharmaceutical and Pharmacological Sciences, Padova, Italy <sup>2</sup> Dept. of Industrial Engineering, Padova, Italy

Poster number	Poster Topic	Presenters	Group
43	A combined experimental and computational analysis of the effect of powder and granule properties on tablet compaction characteristics	S. Oka <sup>1</sup> O. Kaspar <sup>2</sup> V. Tokarova <sup>2</sup> D. Barrasso <sup>1</sup> A. Chaudhury <sup>1</sup> K.Sowrirajan <sup>1</sup> F. Stepanek <sup>2</sup> R. Ramachandran <sup>1</sup>	<sup>1</sup> Rutgers, The State University of New Jersey, USA <sup>2</sup> Institute of Chemical Technology, Prague, Czech Republic
44	Development and evaluation of a novel pharmaceutical excipient by co-processing of microcrystalline cellulose and magnesium silicate by roller compaction	O.M. Boudier <sup>1</sup> I.S. Rashid <sup>2</sup> M.M. Al Omari <sup>2</sup> A.A. Badwan <sup>2</sup> H.S. AlKhatib <sup>2</sup>	<sup>1</sup> University of Jordan, Amman, Jordan <sup>2</sup> The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan
45	Agglomeration of particles in oil-continuous suspensions driven by liquid bridges	A.A. Negreiros <sup>1</sup> T.O. Althaus <sup>2</sup> G. Niederreiter <sup>3</sup> S. Palzer <sup>3</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> Nestlé PTC York, UK <sup>3</sup> Nestlé SA, Vevey, Switzerland

## POSTER TIMETABLE

### Day 2 – Thursday 27<sup>th</sup> June (Main hall)

Poster number	Poster Topic	Presenters	Group
46	Implementation of small scale continuous wet granulation in the pharmaceutical industry	J. Robertson	GlaxoSmithKline R+D, Harlow, UK
47	Lipid microspheres manufactured by prilling process: From raw materials properties to the final product	F. Séquier <sup>1,2</sup> V. Faivre <sup>1</sup> G. Daste <sup>2</sup> M. Renouard <sup>2</sup> S. Lesieur <sup>1</sup>	<sup>1</sup> University Paris-Sud, Châtenay Malabry, France <sup>2</sup> Sanofi, Carbon Blanc Cedex, France
48	Experimental and numerical investigation on the compression behaviour of tetrahedral agglomerates	P. Mueller H. Glöckner J. Tomas	Otto-von-Guericke University Magdeburg, Germany
49	Stochastic Modelling of fluidised bed spray agglomeration tracking particle structure	M. Dervedde <sup>1</sup> M. Peglow <sup>2</sup> E. Tsotsas <sup>3</sup>	<sup>1</sup> Otto-von-Guericke University, NaWiTec, Magdeburg, Germany <sup>2</sup> IPT Pergande GmbH, Germany <sup>3</sup> Otto-von-Guericke University, Magdeburg, Germany
50	Influence of internal structure parameters and additives on the mechanical properties of spray dried granules	S. Eckhard M. Fries	Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany
51	Granulation of ultra-fine powders: tracking changes in granular microstructure using XRCT	N.B. Davis <sup>1</sup> S.A. Dale <sup>2</sup> K. Waibel <sup>1</sup> J.D. Litster <sup>1,2</sup>	<sup>1</sup> Department of Chemical Engineering, Purdue University, USA <sup>2</sup> Department of Industrial and Physical Pharmacy, Purdue University, USA <sup>3</sup> School of Mechanical Engineering, Purdue University, USA
52	Evaluation of compacted preparations comprising binary mixtures of starch and magnesium silicate with model low strength water soluble drugs	F.T. Al- Akayleh <sup>1</sup> Z.K. Al-Qaysi <sup>1</sup> M.S. Shubair <sup>1</sup> I.S. Rashid <sup>2</sup> A.A. Badwan <sup>2</sup>	<sup>1</sup> Petra University, Jordan <sup>2</sup> The Jordanian Pharmaceutical Manufacturing Co. Naor, Jordan
53	Dynamic image analysis offers new applications in production and quality control	G. Beckmann <sup>1</sup> J. Ayar <sup>2</sup>	<sup>1</sup> Retsch Technology GmbH, Germany <sup>2</sup> Retsch UK Ltd, Castleford, UK
54	Effect of process parameters during high-shear granulation on the content uniformity of resulting low dose tablets	S. Kindgen <sup>1</sup> M. Knoell <sup>2</sup> U. Schmidt <sup>2</sup> J. Müller <sup>2</sup> P. Langguth <sup>1</sup>	<sup>1</sup> Johannes Gutenberg-University of Mainz, Germany <sup>2</sup> Hüttlin GmbH – A Bosch Packing Technology Company, Schopfheim, Germany
55	The application of a materials science-based approach for drug product design and understanding	P.A. Trusty	GlaxoSmithKline, Global Manufacturing & Supply, Ware, UK
56	Investigation of the particle surface in fluidized bed spray granulation	T. Hoffmann A. Bück E. Tsotsas	NaWiTec, Otto von Guericke University Magdeburg, Germany

Poster Timetable – Day 2

Poster number	Poster Topic	Presenters	Group
57	Characterization of particles' motions of a granular bed in a low shear mixing device	S. Mandato <sup>1</sup> B. Cuq <sup>1</sup> T. Ruiz <sup>2</sup>	<sup>1</sup> U.M.R. IATE – Montpellier France <sup>2</sup> U.M.R. IATE – Université Montpellier France
58	Development of a growth regime map for a novel reverse-phase wet granulation process	J.B. Wade <sup>1,2</sup> G.P. Martin <sup>1</sup> D.F. Long <sup>2</sup>	<sup>1</sup> King's College London, UK <sup>2</sup> Eli Lilly and Company, Indianapolis, USA
59	Quantify the influence of interparticle cohesive force on fluidization	J. Ma D. Liu X. Chen	Southeast University, Nanjing, P.R.China
60	Continuous melt granulation: Influence of process and formulation parameters on granule attributes	T. Monteyne <sup>1</sup> J.P. Remon <sup>2</sup> C. Vervaet <sup>2</sup> T. De Beer <sup>1</sup>	<sup>1</sup> Laboratory of Pharmaceutical Process Analytical Technology, Ghent University, Belgium <sup>2</sup> Laboratory of Pharmaceutical Technology, Ghent University, Belgium
61	One dimensional model for the prediction of residence time distribution granulation in a twin-screw granulator	A. Kumar <sup>1,2</sup> K.V. Gernaey <sup>3</sup> T. De Beer <sup>2</sup> I. Nopens <sup>1</sup>	<sup>1</sup> Dept. of Mathematical Modelling, Statistics and Bioinformatics, Ghent University, Belgium <sup>2</sup> Dept. of Pharmaceutical Analysis, Ghent University, Belgium <sup>3</sup> Technical University of Denmark, Kongens Lyngby, Denmark
62	A comparison of granule properties between impeller slash in high shear mixer and screw rotation in twin screw extruder	Z. Wang M.J. Hounslow A.D. Salman	University of Sheffield, UK
63	Designing fix-bed reactor for esterification using ion-exchange resin as catalyst	S. Ralebhat, S. Boite S.B. Shinde	Sir Parashurambhau College, Pune, India
64	Adsorption of nanoparticles on sugars using fluid bed drying	R. Shegokar <sup>1,2</sup> K.K. Singh <sup>1</sup>	<sup>1</sup> Freie Universität Berlin, Germany <sup>2</sup> C.U. Shah College of Pharmacy, SNDT University, Mumbai, India
65	Agglomeration of wet granular material during dense flow	N. Berger <sup>1,2</sup> E. Azema <sup>1</sup> F. Radjai <sup>1</sup> J-F. Douce <sup>2</sup>	<sup>1</sup> Laboratoire de Université Montpellier II, France <sup>2</sup> ArcelorMittal Maizières Research, Maizières-lès-Metz, France
66	Drug form kinetics as a function of high shear wet granulation captured using on-line Raman spectroscopy	J.R. Brown X. Dai A.B. Dennis J.W. Jones P.J. Reddy W.E. Sinclair P. Timmins	Bristol Myers Squibb Research & Development, Moreton, UK
67	Comparison of two different fiber optic probes for the in-line NIR based granule moisture assessment in the drying unit of a continuous pharmaceutical tableting process	M. Fonteyne <sup>1</sup> J. Arruabarrena <sup>2</sup> J. Verduyck <sup>3</sup> C. Vervaet <sup>3</sup> J.P. Remon <sup>3</sup> T. De Beer <sup>1</sup>	<sup>1</sup> Laboratory of Pharmaceutical PAT, Ghent University, Belgium <sup>2</sup> Universitat Autònoma de Barcelona, Spain <sup>3</sup> Laboratory of Pharmaceutical Technology, Ghent University, Belgium

Poster Timetable – Day 2

Poster number	Poster Topic	Presenters	Group
68	Novel approach for interpreting powder flow behaviour using powder adhesion and cohesion plots	B. Gururajan <sup>1</sup> N. Sewell <sup>2</sup> G. Reynolds <sup>2</sup>	<sup>1</sup> AstraZeneca R&D, Mölndal, Sweden <sup>2</sup> AstraZeneca R&D, Macclesfield, United Kingdom
69	Continuous wet granulation - A robust granulation technique for challenging active pharmaceutical ingredients	I. Yadav J. Crooks R. Patel J. Robertson M. Ghirardi	GlaxoSmithKline R&D, Harlow, UK,
70	Hot-melt coating of hydrosensitive products	C. Pacheco <sup>1,2</sup> A. Khoufch <sup>1</sup> J. Piña <sup>2</sup> K. Saleh <sup>1</sup>	<sup>1</sup> Université de Technologie de Compiègne, France <sup>2</sup> PLAPIQUI (UNS – CONICET, Bahía Blanca, Argentina
71	Dimensional analysis of milk concentrates spraying	J. Petit <sup>1,4,5</sup> S. Méjean <sup>2</sup> L. Galet <sup>3</sup> P. Accart <sup>3</sup> , P. Schuck <sup>5</sup> G. Delaplace <sup>4</sup> R. Jeantet <sup>5</sup>	<sup>1</sup> Université de Lorraine, France <sup>2</sup> Bionov, France <sup>3</sup> Université de Toulouse, France. <sup>4</sup> INRA, UR638, PIHM, France <sup>5</sup> Agrocampus Ouest, INRA, UMR1253, STLO, Rennes, France
72	Development of appropriate granulation techniques for a novel agrochemical granule formulation with built-in adjuvant	A. Batra H. Dave M. Logan D. Linscott D. Williams R. Boucher L. Liu L. Aulisa	Dow AgroSciences, Indianapolis, USA
73	Study on the influence of granulation process parameters on tablet properties using transmission and backscattering Raman and transmission NIR	E. Peeters <sup>1</sup> M. Toiviainen <sup>2</sup> J. Van Renterghem <sup>3</sup> A.F. Silva <sup>3</sup> M. Fonteyne <sup>3</sup> T. De Beer <sup>3</sup> C. Vervae <sup>1</sup> J.P. Remon <sup>1</sup>	<sup>1</sup> Laboratory of Pharmaceutical Technology, Ghent University, Belgium <sup>2</sup> VTT Technical Research Centre of Finland, Kuopio/Oulu, Finland <sup>3</sup> Laboratory of Pharmaceutical Process Analytical Technology, Ghent University, Belgium
74	Investigation into the granulation of nanoparticles using scanning electron microscopy and focussed ion beam techniques	S.J. Dempsey <sup>1</sup> L. Bowen <sup>2</sup> M. Szablewski <sup>1</sup> D. Atkinson <sup>1</sup>	<sup>1</sup> Department of Physics, Durham University, UK <sup>2</sup> Durham Microscopy Facility, Durham University, UK
75	Electrostatics effect on bed pressure fluctuation during fluidization of pharmaceutical particles	L. Benelli C.R.F. Souza W.P. Oliveira	University of São Paulo, Brazil
76	Optimisation of granule size in pulsed spray fluidised bed granulation using the box-behnken experimental design	H. Liu K.Wang W. Schlindwein M. Li	De Montfort University, Leicester, UK



Poster Timetable – Day 2

Poster number	Poster Topic	Presenters	Group
77	Study of powder extrusion on a small-scale experimental set-up: Influence of formulation	F. Cavallès F. Sardou S. Hoppe V. Falk	Université de Lorraine, Nancy, France
78	Using DEM as a tool for the development of population balance kernels	R.M. Smith	The University of Sheffield, UK
79	Scaling up of Na <sub>2</sub> WO <sub>4</sub> -Mn/SiO <sub>2</sub> catalyst synthesis	U. Simon <sup>1</sup> M. Wiedemann <sup>1</sup> S. Sadjadi <sup>2</sup> S. Arndt <sup>3</sup> O. Görke <sup>1</sup>	<sup>1</sup> Institute for Material Science and Technologies, Technische Universität Berlin, Germany <sup>2</sup> Chair of Process Dynamics and Operation, Technische Universität Berlin, Germany <sup>3</sup> Department of Chemistry, Technische Universität Berlin, Germany
80	Foam as a new binder for powder granulation: Rheology approach, granules properties and effect of gelling products	G. Lefebvre D. Oulahna A. de Ryck A. Michrafy	Université de Toulouse, France
81	Melt granulation: Effects of operating variables on particles growth mechanisms	S. Veliz, I. Cotabarren, D. Bertín, J. Piña, M. Pedernera V. Bucalá	PLAPIQUI, Universidad Nacional del Sur, Bahía Blanca, Argentina
82	Process parameters selection for end-use products and scale-up of fluid bed wet granulation and drying	S. Martin <sup>1</sup> C. Gabaude-Renou <sup>2</sup> M. Berger <sup>3</sup> J-R. Authelin <sup>4</sup>	<sup>1</sup> SCoPT consulting, Trevooux, France <sup>2</sup> Sanofi, Pharmaceutical Sciences Department, Montpellier, France <sup>3</sup> Sanofi, Clinical & Scientific Operations, Montpellier, France <sup>4</sup> Sanofi, Pharmaceutical Sciences Department, Vitry-Sur-Seine, France
83	Design space estimation of the roller compaction process	N. Souihi <sup>1,2</sup> M. Josefson <sup>3</sup> P. Tajarobi <sup>3</sup> B. Gururajan <sup>3</sup> J. Trygg <sup>1</sup>	<sup>1</sup> Department of Chemistry, Umeå University, Sweden <sup>2</sup> Industrial Doctoral School, Umeå University, Sweden <sup>3</sup> Pharmaceutical Development, AstraZeneca R&D Mölndal, Sweden
84	Architecture of the multiscale simulation environment for modelling of fluidized bed granulation	M. Dosta S. Heinrich	Hamburg University of Technology, Germany
85	The development of a controlled release preparation comprising metronidazole and compacted hydrophilic binary polymer matrix of chitosan and xanthan gum	I.S. Rashid <sup>1</sup> K.A. Alkhamis <sup>2</sup> T.H. Altalafha <sup>1</sup> H.A. Hassan <sup>1</sup> A.A. Badwan <sup>1</sup>	<sup>1</sup> The Jordanian Pharmaceutical Manufacturing Co., Naor, Jordan <sup>2</sup> Jordan University of Science and Technology, Irbid, Jordan

Poster Timetable – Day 2

Poster number	Poster Topic	Presenters	Group
86	Assessment of single particle contact mechanisms and cohesion under controlled temperature and humidity	C.I. Haider <sup>1</sup> T.O. Althaus <sup>2</sup> G. Niederreiter <sup>3</sup> S. Palzer <sup>3</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	1 University of Sheffield, UK 2 Nestlé Product Technology Centre, UK 3 Nestlé SA Headquarters, Vevey, Switzerland
87	Critical assessment of the unified compaction curve model	J. Mosig P. Kleinebudde	Heinrich-Heine-University, Duesseldorf, Germany
88	Flow pattern and stability analysis in pneumatic conveying of pulverized coal in an industrial-scale horizontal pipe	X. Guo H. Lu K. Xie X. Gong	East China University of Science and Technology, Shanghai, China
89	Assessment of granule parameters for implementation in process monitoring and control of twin screw wet granulation using high speed imaging	A.S. El Hagrasy <sup>1</sup> P. Cruise <sup>2</sup> I. Jones <sup>2</sup> J.D. Litster <sup>1,3</sup>	<sup>1</sup> School of Chemical Engineering, Purdue University, USA <sup>2</sup> Innopharma Labs, Sandyford, Ireland <sup>3</sup> Department of Industrial and Physical Pharmacy, Purdue University, USA
90	Semi-solid binder dispersion in detergent agglomeration	M. Balashanmugam <sup>1</sup> A.E. Bayly <sup>2</sup> Y.S. Cheong <sup>2</sup> M.J. Hounslow <sup>1</sup> A.D. Salman <sup>1</sup>	<sup>1</sup> University of Sheffield, UK <sup>2</sup> Procter and Gamble, Beijing Innovation Centre, China