CURRENT TRENDS IN COMMODITY SCIENCE
Packaging and Product Quality

Edited by
Henryk Szymusiak
Natalia Czaja-Jagielska

Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu
POZNAŃ 2011
# TABLE OF CONTENTS

**Preface** *(Natalia Czaja-Jagielska, Henryk Szymusiak)* .................................................... 7

**Antonina Dubinina, Svitlana Lehnert, Olga Kruglova**  
Studying the adhesion power of chitosan film with paper (cardboard) ........................................ 9

**Stanisław Hornik**  
Current trends in packaging cosmetic products and attitudes of their customers .......... 17

**Agnieszka Kańczukowska-Stadnik, Natalia Czaja-Jagielska**  
The model of new packaging development process ................................................................. 27

**Andrzej Kochański, Karolina Assman, Hieronim Kubera, Natalia Czaja-Jagielska**  
Data preparation and the preliminary assumptions of the artificial neural network structure for the evaluation of biodegradable packaging materials ................................................................. 36

**Małgorzata Lisińska-Kuśnierz, Agnieszka Kawecka**  
Attitude of food packaging supply chain stakeholders toward packaging safety .......... 45

**Janina Malinowska, Jerzy Żuchowski**  
Effect of Polish accession to the European Union on some indices of the effectiveness of packaging waste management .................................................................................................................................................. 54

**Dominik Paukszta, Anna Gazdulska, Marek Szostak, Joanna Le Thanh-Blicharz, Grażyna Lewandowicz**  
Polyethylene composites filled with starch octenylsuccinate ...................................................... 66

**Patrycja Wojciechowska**  
Nanocomposites for food packaging applications ....................................................................... 74

**Małgorzata Biniecka, Barbara Combi**  
Diamond quality: parameters for the certification ...................................................................... 83

**Regina Borek-Wojciechowska, Sylwia Klokov**  
The perception of services quality assessment criteria in Polish hospitals .............................. 94

**Barbara Hadryjańska, Justyna Górna**  
The activities of Wielkopolska companies towards improving the environmental performance of dairy products’ manufacturing process .................................................................................................................. 102
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marta Karkaliková, Alica Lacková, Rastislav Strhan</td>
<td>Application of HACCP system in public catering organisations</td>
<td>112</td>
</tr>
<tr>
<td>Justyna Kiewlicz, Henryk Szymusiak</td>
<td>Long-chain esters of phenolic acids as multifunctional components of cosmetic products</td>
<td>119</td>
</tr>
<tr>
<td>Małgorzata Kotowska, Karolina Assman, Hieronim Kubera</td>
<td>The characteristics and analysis of the pharmaceutical market in Poland</td>
<td>133</td>
</tr>
<tr>
<td>Anna Kowalczyk, Alicja Maleszka</td>
<td>Individual control chart and moving range chart in comparison with standardized control charts in short production run</td>
<td>142</td>
</tr>
<tr>
<td>Stanisław Kowalczyk, Regina Borek-Wojciechowska</td>
<td>Significance of OSH training in the system of occupational safety and health management</td>
<td>152</td>
</tr>
<tr>
<td>Eugeniusz Krzemień, Radosław Wolniak</td>
<td>The assessment of maturity level of quality management system – most often applied methods and tools</td>
<td>163</td>
</tr>
<tr>
<td>Mariusz J. Ligarski</td>
<td>The role of audit in the education quality assurance system</td>
<td>174</td>
</tr>
<tr>
<td>Jacek Łuczk, Małgorzata Miśniakiewicz</td>
<td>Risk management as basic of management system on Polish government offices example</td>
<td>183</td>
</tr>
<tr>
<td>Jacek Łuczak</td>
<td>Identification and evaluation of relevance of methods and techniques of quality management on the example of suppliers in the automotive industry. Research results</td>
<td>194</td>
</tr>
<tr>
<td>Agnieszka Skolik</td>
<td>Comparison and application of scaling methods</td>
<td>205</td>
</tr>
<tr>
<td>Amalia Venera Todoruţ, George Niculescu</td>
<td>New dimensions in quality</td>
<td>211</td>
</tr>
<tr>
<td>Paweł Turek</td>
<td>Application of methods of sensory analysis in resolving a dispute over product quality – case study</td>
<td>221</td>
</tr>
<tr>
<td>Maciej Urbaniak</td>
<td>Possibilities and conditions relating to the improvement of product quality</td>
<td>228</td>
</tr>
</tbody>
</table>
Tomasz Wasilewski
The functionality of commercial hand dishwashing liquids ........................................ 238

Artur Wolak
The impact of studies in Commodity Science on product information analysis
exemplified by cosmetics ........................................................................................................ 247

Artur Wolak, Jerzy Szakiel
Consumer ratings for sunscreen cosmetics .................................................................................. 256