University of Huddersfield Repository


The influence of salt formation on electrostatic and compression properties of flurbiprofen salts

Original Citation


This version is available at http://eprints.hud.ac.uk/18994/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

• The authors, title and full bibliographic details is credited in any copy;
• A hyperlink and/or URL is included for the original metadata page; and
• The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/
Figures

Figure 1: The structure of flurbiprofen acid

Figure 2: Faraday cup (top) (Matsusaka et al., 2010) and its equivalent circuit (bottom)
Figure 3: XRD patterns of flurbiprofen and the salts formed using different counter ions.
Figure 4: SEM images of a) flurbiprofen (x1,100), b) F-But (x1,100), c) F-Tbut (x100), d) F-AMP1 (x400).

Figure 5: Charge to mass ratio as a function of shaking time inside a stainless steel container at 20 Hz and a temperature of 23 °C with the relative humidity at 47 % for the API 1 powder.
Figure 6: Specific charge and polarity for flurbiprofen and the salts against stainless steel container at saturation point of tribo-charging.

Figure 7: Packing of F-Tbut salt viewed down the $a$ axis.
**Figure 8:** Packing of F-AMP1 salt viewed down the $a$ axis.

**Figure 9:** Packing of F-Tris salt viewed down the $a$ axis.
**Figure 10:** Percentage of mass loss of flurbiprofen corresponding to the charge to mass ratio in Figure 5 by powder adhering to the stainless steel container surface at 20 Hz.

**Figure 11:** Percentage of mass loss for API samples against a stainless steel surface after 1 minute of tribo-charging.
**Figure 12:** Compact tensile strength of fluriprofen and its salts (n=5).