Solubility enhancing of sertraline using liquid-solid technique

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The poor dissolution rate of water insoluble drugs is still a major problem confronting in the pharmaceutical industry. The most common method employed is increasing the surface area of drug by micro-ionization, but in practice the effect of micro-ionization is often disappointing especially when drug is encapsulated or tableted. This phenomenon was attributed to the agglomeration tendency of micronized, poorly soluble hydrophobic drug (E.g., Sertraline) which results in decreased effective surface area for dissolution. Sertraline is used in treatment of depression. Sertraline exhibit poor solubility in water, which comes under class-ii according to BCS classification. The premium aim of present work is to enhance dissolution rate of Sertraline using liquid-solid technique. By using this concept liquid medication like solutions of water insoluble solids drugs in non volatile vehicle are converted in to acceptably flowing powder. Liquid medication may be converted in to dry-form, non adherent free flowing powder by a simple blending with selected powder excipients referred as the carrier material and then filled into capsules.