



PHARMADEV S.A.

Geneva May 16, 2023

IBUPROFEN FAST ACTING FORMULATIONS

PHARMADEV S.A. is a Swiss company with an affiliate PHARMADEV HEALTHCARE Ltd (Dublin, Ireland) for EU.

Founded in 2007 PHARMADEV develops patented generic plus products to improve their tolerance and efficacy but focus on few products for a better knowledge of their potential.

- Fast acting derivative of Ibuprofen, OTC analgic drug product with a patented process for high performance APIs. PHARMADEV holds Market Authorizations for 200 and 400 mg film-coated tablets Ibuprofen sodium salt (FR, IT, DE)

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Ibuprofen is a weak acid ($pK_a = 4.9$) poorly soluble at pH below 6 that slows its absorption the GI tract (T_{max} from 1 to 2 hours). Pharmaceutical acceptable salts of Ibuprofen on the contrary due to their higher solubility have a quicker absorption and therefore a faster onset of pain relief.

Patented Manufacture process FR 1905539 - PCT/EP2020/064345

PHARMADEV developed and patented a crystal coating process that allows to manufacture free flowing granulate of IBUPROFEN salts (sodium, lysine ...) with less than 14% of excipient allowing direct capsule filling capsule (size 1 for 200 mg) or tableting including combination with others API (caffeine, pseudoephedrine). PHARMADEV have a good experience of this eco-responsible process (using 6 times less energy than the standard granulation method) and leading to very stable formulation (ICH stability 48 months no degradation).

Marketing Authorizations France, Germany, Italy (DCP Germany as RMS: DE H6477001002 DC)

Regarding the soluble sodium salt of Ibuprofen, PHARMADEV HEALTHCARE have got OTC's marketing authorization for 200 and 400 mg film-coated tablets indicated in small to moderate pains and migraine.