

METHYLPHENIDATE

AMARIN TECHNOLOGIES
Transdermal System Overview



1. AMARIN Product

The formulation developed by Amarin is a Drug-In adhesive patch, designed to be the first generic non-copypat formulation of Daytrana® (Noven Pharmaceuticals, USA), which is the Reference Listed Drug. It is presented in 4 dosage strengths as well as Daytrana is; however it has no backing removal difficulties, avoiding massive product recalls and shortages due to patient-reported problems opening the patch for application, as it currently occurs with Daytrana.

2. Pharmaceutical & Clinical Development Status

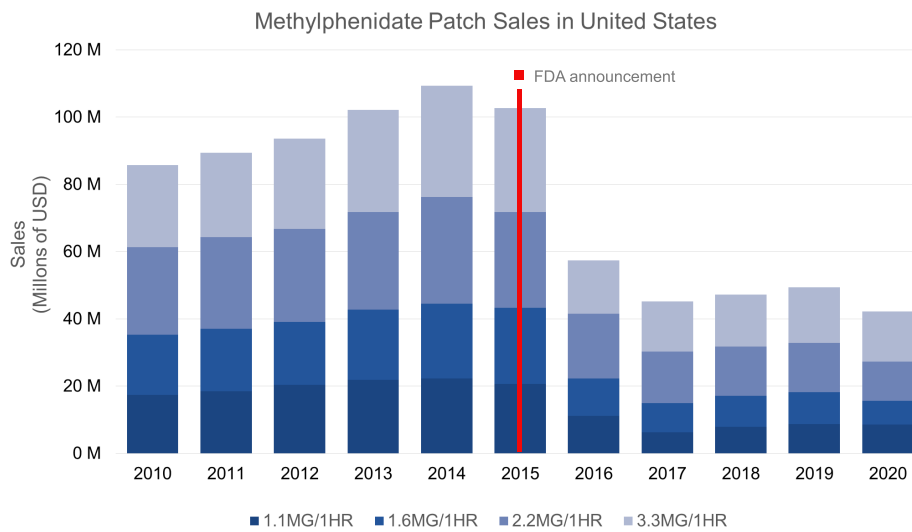
Amarin's Methylphenidate patch, initially required by the American 'Rhodes Pharmaceuticals' has achieved the following CMC development stages:

- Formulation & analytical development
- Abbreviated validation
- Stability → Up to 24 months in climatic condition II + 6 months at accelerated conditions
→ New stability plan ongoing due to updated configuration of primary packaging
- Pilot clinical pK study predicting bioequivalence vs RLD
- Adhesion study

3. Amarin patch challenged against Daytrana

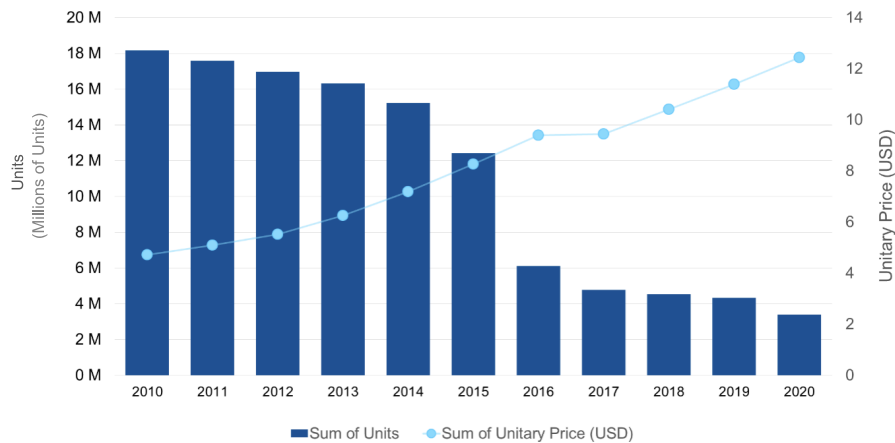
	Daytrana® 30 mg/9h	Amarin Methylphenidate 30 mg/9h
Size	37.5 cm ²	25.1 cm ² - 30% smaller
Drug Content & residual Drug in worn patch		About 40% less
Customer complaints	Backing removal is tough and often leads to adhesive loss and patch discard	No removal or adhesive difficulties, as Amarin adhesive is different
Clinical issues	Unfrequent Adverse skin reaction: non-reversible skin color loss (50 cases in 9 years)	Unknown so far

4. Market Figures



The market is nowadays stable around USD 50M annually with no generics in sight, representing a cash cow for Noven Pharmaceuticals, despite the following events:

- Steep drop in volume in 2016, presumably due to the adverse skin reaction reported by FDA in June 2015.
- Consistent and current difficulty since 2007 with the protecting lining removal: only in 2020, 14 batches and around 1.5 M units were recalled.



During the last ten years, the sales performance for Daytrana® has been showing a pronounced inverted variation between a volume decrease and a simultaneous progress on the unit price. As a consequence of unequal variations of the mentioned figures, the aggregated outcome is a restricted market in terms of volume (4.5M per year) with an expanding margin.

Transdermal Patches sales only represented 2.6% of the total Methylphenidate Market (1.9 billion USD) which is serving as an exceptional growing opportunity for a solid and stable product which can solve the weaknesses of the existing patch.