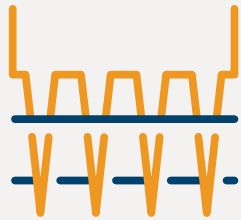


## Microneedle Array Patches

### Microneedle patches for intradermal drug delivery

Take a leap ahead in the evolution of drug delivery with platforms that provide accurate dosing and reliable intradermal delivery for liquid and solid APIs. Kindeva Drug Delivery's revolutionary microneedle array patches, based in 3M technology, are customized to your brand and your patients, ensuring effective administration of both small and large molecules, including: vaccines, peptides, proteins, and biologics. We provide our partners with full-service intradermal capabilities from ideation, formulation development, and preclinical activities through commercial-scale manufacturing.



### Microneedle-based delivery has the potential to offer:

#### Clinical benefits:

- Enhanced immunogenicity (for vaccine delivery)
- Greater efficacy
- PK improvements
- Faster onset of action

#### Environmental:

- Room temperature stability allows for elimination of cold-chain storage

#### Usability:

- Better compliance and adherence
- At-home administration
- Avoids needle phobia

## Revolutionary platforms for your vaccine or API

Optimal intradermal delivery of your drug is made easier with our customizable options:

- **Solid delivery platform** — Solid-coated microneedles offer intuitive administration with consistent and accurate delivery to the epidermis and dermis
- **Liquid delivery platform** — Hollow microneedles initiate a sterile fluid path for delivering your drug intradermally

## Combine forces with a powerhouse CDMO

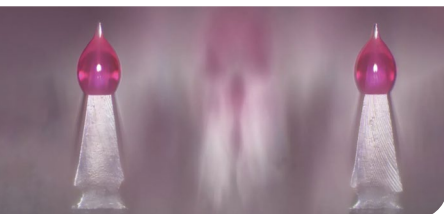
Ensuring your product lives up to your standards requires a wide breadth of expertise. As the creators of the autoinjector, metered-dose inhaler, and drug-in adhesive transdermal patch, Kindeva Drug Delivery has an unrivaled history in innovation.

### Development & clinical leadership

- Rapid feasibility and early-phase development capabilities
- Human tolerability and human factors studies
- Preclinical and clinical capabilities
- Regulatory leadership and expert data analysis

### Operational excellence

- Automated array molding and packaging
- Aseptic array coating for solid microneedles
- High-volume device-assembly equipment
- Manufacturing capability for preclinical, clinical, and commercial





### Your therapy, your way

Your combination product can be customized for your therapy and patients, including:

- Total dose delivered
- Space between microneedles
- Microneedle length
- Droplet volume/solids per microneedle
- Droplet shape
- Coated formulations
- Number of microneedles



## Leverage our unmatched scale and capacity

As a leading CDMO in the world of drug-device combination products, we understand how to bring your product to life.

Your specialized drug delivery can be realized through our extensive capacity and unparalleled capability; for solid microneedle delivery, we can aseptically manufacture >1 million patches per year for clinical trials and have commercial manufacturing capabilities to produce ~14 million patches per year.

Since your product is created in cGMP-registered facilities with global QMS standardization, quality is assured.

## Give your therapy a bright future

When you partner with Kindeva, you benefit from an ongoing, data-driven optimization to improve dose delivery. We are continuously evaluating the combination of array characteristics, formulation, and coating parameters to ensure your product achieves best-in-class performance. Every customization applied to your product is developed in close collaboration with you.

## Deep expertise

Your therapy deserves unrivaled support, which is what you always receive with us. We bring over a century of time-tested know-how to every project and back it up with ten cutting-edge manufacturing and development facilities across two continents. For second-to-none microneedle-based delivery solutions for vaccines and other applications, partner with Kindeva.

**Your therapy is a force for good.  
Our expertise brings it into the world.**

**COMBINE FORCES WITH KINDEVA**

Kindeva Drug Delivery is a global contract development and manufacturing organization focused on drug-device combination products. We develop and manufacture products across a broad range of drug-delivery formats, including pulmonary & nasal, injectable, and transdermal. Our service offerings span early-stage feasibility through commercial scale drug product fill-finish, container closure system manufacturing, and drug-device product assembly. Kindeva serves a global client base from our state-of-the-art manufacturing, research, and development facilities located across the U.S. and U.K.

