

MicroED service from ReadCrystal

ReadCrystal Biotechnology is a Contract Research Organization (CRO). Our cutting-edge electron microscope lab, equipped with specialized hardware and software, is dedicated to MicroED applications.

Applications of MicroED in Pharmaceutical industry

Molecular structure

Absolute structure

Polymorph

Protein structure

The advantages of MicroED comparing to XRD

MicroED is crucial in various scenarios, particularly when acquiring large crystals becomes challenging. This could be due to the difficulty or time consumption of the recrystallization process, or when only limited sample quantities are available.

Nano-sized

$\geq 100\text{nm}$

Small material consumption

$\leq 1\text{mg}$

Efficient

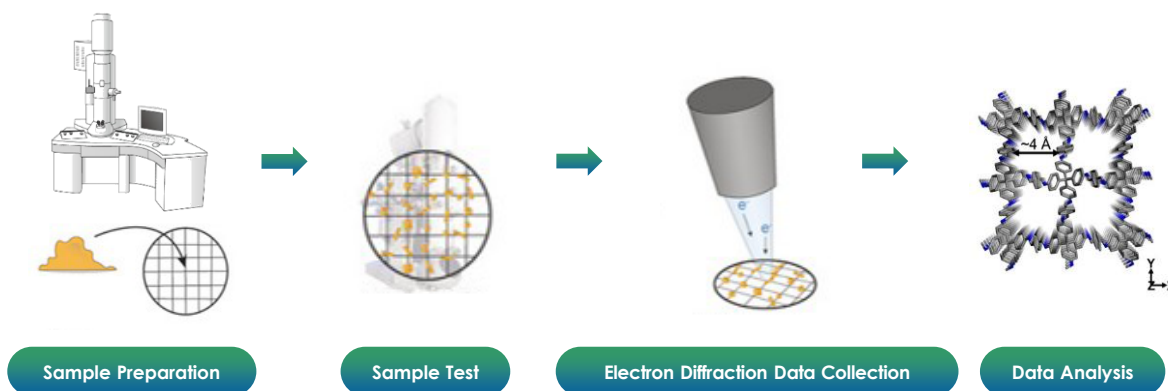
$\leq 3\text{ days}$

Why choose ReadCrystal Biotechnology?

- **Facility:** MicroED Platform with optimized configuration and controlling software
- **Personnel:** Pioneering experts in MicroED technology since 2007
- **Reliability:** Serviced more than 150 industry and research institute within three years
- **Competitive Pricing:** Our goal is to make MicroED accessible to every scientist



Service Content



Case Highlights: Pharmaceutical Compounds

Oseltamivir phosphate is an oral anti-viral drug approved for the treatment of acute, uncomplicated influenza. It is difficult to culture single crystals with appropriate size for X-ray diffraction. We determined the API's structure in powders by MicroED in 2 days.

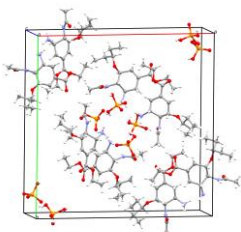
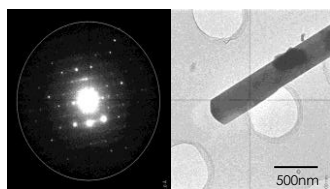


Figure 1. TEM images and 3D electron diffraction and structure of Oseltamivir phosphate

Identification code	Oseltamivir Phosphate
Empirical formula	C ₁₆ H ₃₁ N ₂ O ₈ P
Formula weight	410.40
Space group	P2 ₁ 2 ₁ 2
	$a=23.4 \text{ \AA}$, $b=23.6 \text{ \AA}$, $c=7.2 \text{ \AA}$, $\alpha=\beta=\gamma=90^\circ$
Final R indexes [$I \geq 2\sigma(I)$]	R ₁ = 0.1987, wR ₂ = 0.4698

Table 1. Crystal data for Oseltamivir phosphate

Contact us or visit our website to unlock more exciting case studies!



ReadCrystal Biotechnology Co., Ltd.

Mobile: +86 189 6258 7269

Email: contact@readcrystal.com

Web: <http://www.readcrystalbio.com>

Address: 88 Xianshi Road, Changshu, Suzhou, Jiangsu, China

