



## Fact Sheet

# ARK™ Lacosamide Assay

The ARK™ Lacosamide Assay is a homogeneous enzyme immunoassay for the quantitative determination of lacosamide in human serum on automated clinical chemistry analyzers. The measurements obtained are used in the monitoring of lacosamide levels to help ensure appropriate therapy.

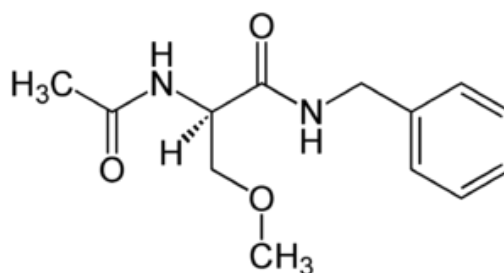
### Assay Characteristics

- Excellent precision, even in trough concentrations
- Fast and efficient routine monitoring for lacosamide
- Liquid, ready-to-use reagents, calibrators and controls
- Storage at 2-8°C
- On-board stability for at least 60 days
- Does not contain any harmful preservatives, only  $\leq 0.09\%$  sodium azide

### Background

Lacosamide ((R)-2-(Acetylamino)-N-benzyl-3-methoxy-propionamide) is a third-generation anti-epileptic drug. Under the drug name Vimpat®, lacosamide has been approved, since 2008, for the use in patients above the age of 16 throughout Europe. Together with other anti-epileptic drugs, lacosamide is used for focal epilepsy attacks with or without secondary generalization.

The mechanism of action of lacosamide has not yet been fully clarified. It is known that lacosamide selectively increases the slow inactivation of sodium channels, but does not affect their rapid deactivation. Thus, the pathophysiological neuronal over-excitability is normalized without suppressing the usual neuron activity.



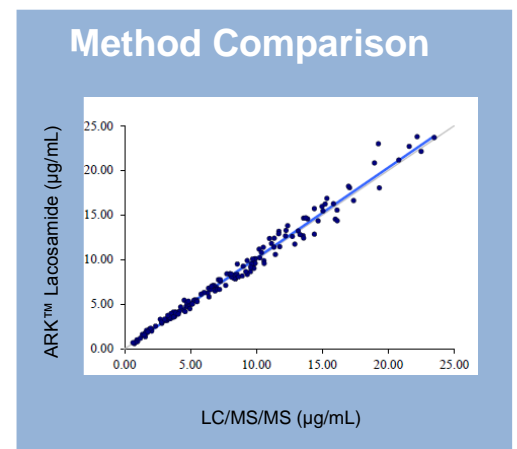


## Properties of Lacosamide

Dose	Twice daily 100 - 200 mg
Bioavailability	~ 100% after dosing
Peak level	0.5 to 4 hours after dosing
Plasma protein binding	<15%
Elimination	95% renal, unchanged (40%) or metabolized, in case of severe renal dysfunction max. daily dose 250 mg
Metabolization	Still unclear, no clinically relevant difference between fast and slow metabolizers
Elimination half-time	11 to 16 hours

## Assay Precision

Sample	N	M (µg/ml)	Repeatability				Reproducibility	
			Within-Run		Between Day		Total	
			SD	CV (%)	SD	CV (%)	SD	CV (%)
<b>ARK™ Lacosamide</b>								
LOW	160	1.55	0.049	3.1	0.049	3.1	0.070	4.5
MID	160	7.13	0.202	2.8	0.204	2.9	0.287	4.0
HIGH	160	14.94	0.450	3.0	0.445	3.0	0.664	4.4
<b>Human Serum</b>								
LOW	160	1.49	0.045	3.0	0.037	2.5	0.058	3.9
MID	160	7.10	0.175	2.5	0.217	3.1	0.283	4.0
HIGH	160	15.18	0.456	3.0	0.432	2.8	0.657	4.3



## Order Information

Product Description	Size	Order No.
ARK™ Lacosamide Assay	28 mL R1 & 14 mL R2	5033-0001-00
ARK™ Lacosamide Calibrator	1 x 4 mL & 5 x 2 mL	5033-0002-00
ARK™ Lacosamide Control	6 x 4 mL	5033-0003-00