Reference Interval:

<table>
<thead>
<tr>
<th>Drugs Covered</th>
<th>Cutoff Concentrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tramadol</td>
<td>25 ng/mL</td>
</tr>
<tr>
<td>O-desmethyltramadol</td>
<td>25 ng/mL</td>
</tr>
</tbody>
</table>

Methodology: Quantitative Liquid Chromatography-Tandem Mass Spectrometry

Positive cutoff: Tramadol: 25 ng/mL
O-desmethyltramadol: 25 ng/mL

For medical purposes only; not valid for forensic use.

The presence of metabolite(s) without parent drug is common and may indicate use of parent drug during the prior week.

The absence of expected drug(s) and/or drug metabolite(s) may indicate non-compliance, inappropriate timing of specimen collection relative to drug administration, poor drug absorption, diluted/adulterated urine, or limitations of testing. The concentration value must be greater than or equal to the cutoff to be reported as positive. Interpretive questions should be directed to the laboratory.

See Compliance Statement B: www.aruplab.com/CS

HOTLINE NOTE: There is a clinically significant charting name change, a result type change, a unit of measure change, and a numeric map change associated with this test.

Change the result type for component 2002740, O-desmethyltramadol, Urn, Qual from alpha response to numeric result type.

Change the unit of measure for component 2002740, O-desmethyltramadol, Urn, Qual to ng/mL.

Change the charting name for component 2002740, O-desmethyltramadol, Urn, Qual to O-desmethyltramadol, Urn, Quant.

Change the numeric map for component 2002769, Tramadol, Urn, Quant from XXXX to XXXX.