

## Preparing 200L of an 8g/L Salt Solution with WandMixer™

Mixing system: Newmix®- Levtech® WandMixer™

Mixing bag: 200L W-Mix bag

Mixing type: Powder-liquid

The Newmix-Levtech WandMixer is a compact and non-invasive single-use mixing system. The heart of this system is a mixing bag incorporating an innovative top-mounted impeller capable of providing efficient mixing for all powder-liquid and liquid-liquid mixing applications. The impeller comprises a rotating wand inside an inert polymer sleeve, and is designed to ensure low particle shedding and total containment while serving effectively in a wide variety of mixing tasks. All product-contacting surfaces are 100% disposable.

### Introduction

Powder-liquid mixing is a common requirement in biopharma processing. In order to optimize mixing efficiency for powder-liquid applications, the WandMixer is available with a large, diagonally-mounted helical mixing wand.

In this experiment, a WandMixer was used to prepare 200L of a concentrated salt solution.



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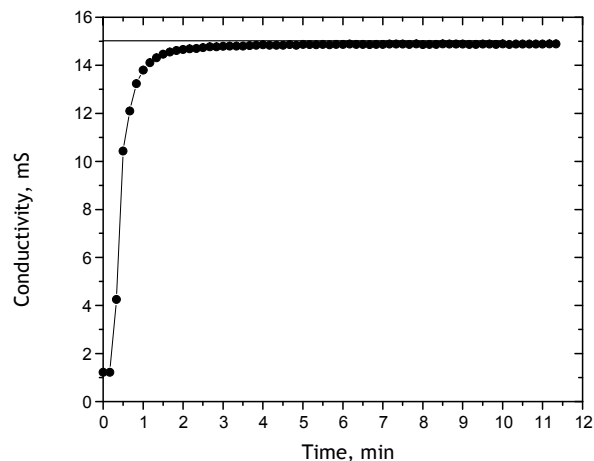
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Application note XA300E 0806rev1

### Experimental

A 200L WandMixer mixing bag was filled with 200L of water, and mixing speed was set to 250rpm. A single 1.6kg addition of sodium chloride (NaCl) powder was made to the mixing bag, resulting in an 8g/L solution. The solution homogeneity was monitored via real-time conductivity readings.



Dissolution of NaCl powder (8g/L) in 200L rotational wand bag

### Results

The accompanying chart shows solution homogeneity in the bag during mixing.

After the NaCl powder addition, mixing was found to be 95% complete within approximately 90 seconds, and 100% complete within approximately 4 minutes. At no time during the mixing cycle did the mixing wand stall or hesitate.

### Conclusions

The Newmix-Levtech WandMixer system is well suited for preparation of concentrated buffer salt solutions. A powder-liquid mixing bag, which includes a top-mounted wand impeller, is a good choice for such applications.

Mixing times in the 90-240 second range are typical at the tested volume and salt concentration.