

# Got Purification Troubles?

## Improve H1N1 Virus Purification Efficiency with the Right Resin



### The Challenge

Does your H1N1 virus culture supernatant require nuclease digestion prior to column loading? Does this pretreatment affect your virus recovery? Do you want to reduce your process purification costs?



### Purification Tip

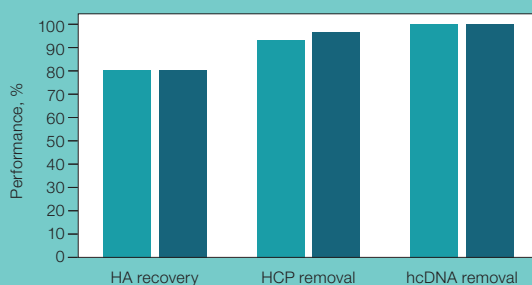
A chromatographic approach using a high-capacity anion exchange resin that removes nucleic acids will eliminate the requirement for a costly nuclease treatment step.



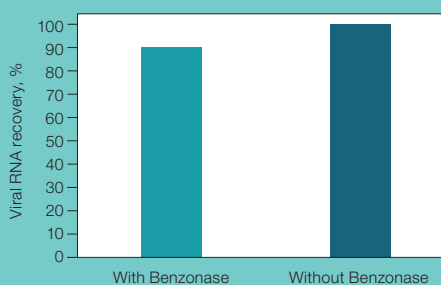
### Our Approach

Microfiltered influenza A virus subtype H1N1 culture supernatants with and without nuclease treatment were loaded onto a 1 ml Foresight Nuvia HP-Q Column as described previously (see [bulletin 7375](#)) and their purification performances were compared. Figure 1A shows that with Nuvia HP-Q Resin there is no benefit from nuclease treatment; total hemagglutinin (HA) recovery and removal of host cell proteins (HCP) and host cell DNA (hcDNA) impurities were the same with and without Benzonase. Furthermore, Figure 1B demonstrates that higher viral RNA recovery can be achieved with Nuvia HP-Q Resin without Benzonase. These results demonstrate that a nuclease step can be avoided by using Nuvia HP-Q Resin chromatography for H1N1 virus purification.

**A. H1N1 recovery and purity with/without Benzonase treatment before Nuvia HP-Q chromatography**



**B. H1N1 viral RNA recovery following elution from Nuvia HP-Q Resin**



**Fig 1. H1N1 virus purification with Nuvia HP-Q Resin.** **A**, performance of Nuvia HP-Q Resin for HA recovery and impurity removal, and **B**, subsequent RNA recovery from the 590 mM NaCl elution fraction, with (■) and without (■) Benzonase treatment of the H1N1 virus cell culture supernatant. HA, hemagglutinin; HCP, host cell proteins; hcDNA, host cell DNA.

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## Nuvia HP-Q Resin

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- More productive large biomolecule purification
- High-throughput purification processes
- Better reproducibility between processes

Go to [bio-rad.com/NuviaHPQ](http://bio-rad.com/NuviaHPQ) and explore the features of Nuvia HP-Q Resin.

## Ordering Information

Catalog #	Description
12006693	Nuvia HP-Q Media, 25 ml
12006691	Nuvia HP-Q Media, 100 ml
12006660	Nuvia HP-Q Media, 500 ml
12006659	Nuvia HP-Q Media, 5 L
12007023	Nuvia HP-Q Media, 10 L
12007022	Nuvia HP-Q Media, benzyl alcohol (B.A.), 25 ml
12007018	Nuvia HP-Q Media, B.A., 100 ml
12007019	Nuvia HP-Q Media, B.A., 500 ml
12007033	Nuvia HP-Q Media, B.A., 5 L
12006994	Nuvia HP-Q Media, B.A., 10 L
12009282	EconoFit Nuvia HP-Q Column, 1 x 1 ml
12007020	Foresight Nuvia HP-Q Column, 1 ml
12007021	Foresight Nuvia HP-Q Column, 5 ml
12007013	Foresight Nuvia HP-Q RoboColumn Unit, 200 µl
12007014	Foresight Nuvia HP-Q RoboColumn Unit, 600 µl
12006908	Foresight Nuvia HP-Q Plates, 2 x 96-well, 20 µl

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- Process development
- Column packing support
- Global technical support



Process purification bottles, columns, and plates.

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