### <u>Sample Name</u>: Poly(acrylic acid-b-ethylene imine)

## **Sample #: P4255E-AAEI**

### **Structure:**

$$\mathsf{Br} = \left( \begin{array}{c} \mathsf{H} \\ \mathsf{C} \\ \mathsf{C} \\ \mathsf{C} \\ \mathsf{CH}_3 \end{array} \right) \left( \begin{array}{c} \mathsf{CH}_3 & \mathsf{O} \\ \mathsf{C} \\ \mathsf{H}_2 \\ \mathsf{H}_2 \\ \mathsf{H}_2 \end{array} \right) \left( \begin{array}{c} \mathsf{H}_2 \\ \mathsf{H}_3 \\ \mathsf{H}_4 \\ \mathsf{H}_2 \\ \mathsf{H}_4 \\ \mathsf{H}_5 \\$$

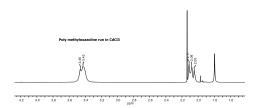
### **Composition:**

Mn x 10 <sup>3</sup> AA-b-EI	PDI
4.0-b-13.0	1.06

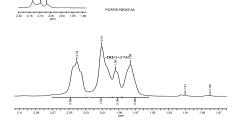
### **Synthesis Procedure:**

The following reaction scheme shows how the product was prepared:

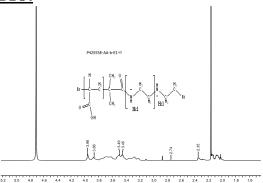
# <sup>1</sup>H-NMR Spectrum of the poly methyloxazoline run in CdCl3:



# <sup>1</sup>H-NMR Spectrum of the polymer. PMEOXZ-b-AA in D2O:



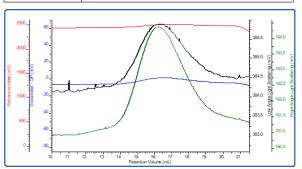
# **1H-NMR Spectrum of the polymer. PEI -b-AA in D2O:**



# **SEC elugram of PMEOXZ macroinitiator used in** this synthesis (run in DMF):

#### P42555D-MEOXZ

dn/dc	0.0840
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	PSS column-PMMA60K-Jan3-2019-0011.vcm



Sample		Mn	Mw	Мр	Mw/Mn
	P42555D-MEOXZ 1 2	25,658	31,971	31,851	1.246

After Hydrolysis: Poly ethyleneimine Mn 13,000

### SEC elugram of the sample (run in H2O):

