

Appendix A4: Probability Plots from Full-Scale Column Tests for Major Constituents and Nutrients

This appendix contains grouped probability plots of influent and effluent concentrations from the long-term full-depth column tests. These plots are organized by media type and then by major constituent. Similar plots for the metal analyses are shown in Appendix A5, while Appendix A11 are grouped plots for the critical constituents. The data are plotted in real space (not transformed by their log values) as most are normally distributed.

The Minitab plots also summarize the statistics for the influent and effluent concentrations, including Anderson-Darling (AD) test statistics. The AD test compared the observed distribution with a normal distribution. If the calculated p value is <0.05 , then the data is considered to be significantly different from the normal distribution. If the p value is greater than 0.05, then it is usually an indication of being normally distributed, although the formal interpretation is that there is not enough data to show that they are different. If the data is plotted on a straight line, they may be normally distributed. Obvious curvatures in the plots indicate non-normal behavior.

The plots visually indicate the differences between the influent and effluent concentrations. If the probability plots, including the 95% confidence limits, are completely separate, then they are clearly significantly different. In many cases, there may be some overlap on one of the extremes of the plots. Also, these plots indicate the variability of the observed concentrations. Steeper plots have smaller variabilities than plots that lean more. Parallel plots indicate similar variances.

Figure A4-1. Probability plots for nitrite and granular activated carbon column.	6
Figure A4-2. Probability plots for nitrate and granular activated carbon column.	6
Figure A4-3. Probability plots for ammonia and granular activated carbon column.	7
Figure A4-4. Probability plots for total phosphorus and granular activated carbon column.	8
Figure A4-5. Probability plots for COD and granular activated carbon column.	8
Figure A4-6. Probability plots for pH and granular activated carbon column.	9
Figure A4-7. Probability plots for conductivity and granular activated carbon column.	9
Figure A4-8. Probability plots for ORP and granular activated carbon column.	10
Figure A4-9. Probability plots for color and granular activated carbon column.	10
Figure A4-10. Probability plots for fluoride and granular activated carbon column.	11
Figure A4-11. Probability plots for sulfate and granular activated carbon column.	11
Figure A4-12. Probability plots for phosphate and granular activated carbon column.	12
Figure A4-13. Probability plots for total nitrogen and granular activated carbon column.	12
Figure A4-14. Probability plots for UV-254 and granular activated carbon column.	13
Figure A4-15. Probability plots for chloride and granular activated carbon column.	13
Figure A4-16. Probability plots for hardness and granular activated carbon column.	14
Figure A4-17. Probability plots for nitrite plus nitrate and granular activated carbon column.	14
Figure A4-18. Probability plots for nitrite and peat moss column.	15
Figure A4-19. Probability plots for nitrate and peat moss column.	15
Figure A4-20. Probability plots for ammonia and peat moss column.	16
Figure A4-21. Probability plots for total phosphate and peat moss column.	16
Figure A4-22. Probability plots for COD and peat moss column.	17
Figure A4-23. Probability plots for pH and peat moss column.	17
Figure A4-24. Probability plots for conductivity and peat moss column.	18

Figure A4-25. Probability plots for ORP and peat moss column.	18
Figure A4-26. Probability plots for color and peat moss column.	19
Figure A4-27. Probability plots for fluoride and peat moss column.	19
Figure A4-28. Probability plots for sulfate and peat moss column.	20
Figure A4-29. Probability plots for phosphate and peat moss column.	20
Figure A4-30. Probability plots for total nitrogen and peat moss column.	21
Figure A4-31. Probability plots for UV-254 and peat moss column.	21
Figure A4-32. Probability plots for chloride and peat moss column.	22
Figure A4-33. Probability plots for hardness and peat moss column.	22
Figure A4-34. Probability plots for nitrite plus nitrate and peat moss column.	23
Figure A4-35. Probability plots for nitrite and Rhyolite sand column.	24
Figure A4-36. Probability plots for nitrate and Rhyolite sand column.	24
Figure A4-37. Probability plots for ammonia and Rhyolite sand column.	25
Figure A4-38. Probability plots for total phosphorus and Rhyolite sand column.	25
Figure A4-39. Probability plots for COD and Rhyolite sand column.	26
Figure A4-40. Probability plots for pH and Rhyolite sand column.	26
Figure A4-41. Probability plots for conductivity and Rhyolite sand column.	27
Figure A4-42. Probability plots for ORP and Rhyolite sand column.	27
Figure A4-43. Probability plots for color and Rhyolite sand column.	28
Figure A4-44. Probability plots for fluoride and Rhyolite sand column.	28
Figure A4-45. Probability plots for sulfate and Rhyolite sand column.	29
Figure A4-46. Probability plots for phosphate and Rhyolite sand column.	29
Figure A4-47. Probability plots for total nitrogen and Rhyolite sand column.	30
Figure A4-48. Probability plots for UV-254 and Rhyolite sand column.	30
Figure A4-49. Probability plots for chloride and Rhyolite sand column.	31
Figure A4-50. Probability plots for hardness and Rhyolite sand column.	31
Figure A4-51. Probability plots for nitrite plus nitrate and Rhyolite sand column.	32
Figure A4-52. Probability plots for nitrite and site filter sand column.	33
Figure A4-53. Probability plots for nitrate and site filter sand column.	33
Figure A4-54. Probability plots for ammonia and site filter sand column.	34
Figure A4-55. Probability plots for total phosphate and site filter sand column.	34
Figure A4-56. Probability plots for COD and site filter sand column.	35
Figure A4-57. Probability plots for pH and site filter sand column.	35
Figure A4-58. Probability plots for conductivity and site filter sand column.	36
Figure A4-59. Probability plots for ORP and site filter sand column.	36
Figure A4-60. Probability plots for color and site filter sand column.	37
Figure A4-61. Probability plots for fluoride and site filter sand column.	37
Figure A4-62. Probability plots for sulfate and site filter sand column.	38
Figure A4-63. Probability plots for phosphate and site filter sand column.	38
Figure A4-64. Probability plots for total nitrogen and site filter sand column.	39
Figure A4-65. Probability plots for UV-254 and site filter sand column.	39
Figure A4-66. Probability plots for chloride and site filter sand column.	40
Figure A4-67. Probability plots for hardness and site filter sand column.	40
Figure A4-68. Probability plots for nitrite plus nitrate and site filter sand column.	41
Figure A4-69. Probability plots for nitrite and site zeolite column.	42
Figure A4-70. Probability plots for nitrate and site zeolite column.	42
Figure A4-71. Probability plots for ammonia and site zeolite column.	43
Figure A4-72. Probability plots for total phosphorus and site zeolite column.	43
Figure A4-73. Probability plots for COD and site zeolite column.	44
Figure A4-74. Probability plots for pH and site zeolite column.	44
Figure A4-75. Probability plots for conductivity and site zeolite column.	45
Figure A4-76. Probability plots for ORP and site zeolite column.	45
Figure A4-77. Probability plots for color and site zeolite column.	46
Figure A4-78. Probability plots for fluoride and site zeolite column.	46
Figure A4-79. Probability plots for sulfate and site zeolite column.	47
Figure A4-80. Probability plots for phosphate and site zeolite column.	47

Figure A4-81. Probability plots for total nitrogen and site zeolite column.....	48
Figure A4-82. Probability plots for UV-254 and site zeolite column.....	48
Figure A4-83. Probability plots for chloride and site zeolite column.....	49
Figure A4-84. Probability plots for hardness and site zeolite column.....	49
Figure A4-85. Probability plots for nitrite plus nitrate and site zeolite column.....	50
Figure A4-86. Probability plots for nitrite and surface modified zeolite column.....	51
Figure A4-87. Probability plots for nitrate and surface modified zeolite column.....	51
Figure A4-88. Probability plots for ammonia and surface modified zeolite column.....	52
Figure A4-89. Probability plots for total phosphate and surface modified zeolite column.....	52
Figure A4-90. Probability plots for COD and surface modified zeolite column.....	53
Figure A4-91. Probability plots for pH and surface modified zeolite column.....	53
Figure A4-92. Probability plots for conductivity and surface modified zeolite column.....	54
Figure A4-93. Probability plots for ORP and surface modified zeolite column.....	54
Figure A4-94. Probability plots for color and surface modified zeolite column.....	55
Figure A4-95. Probability plots for fluoride and surface modified zeolite column.....	55
Figure A4-96. Probability plots for sulfate and surface modified zeolite column.....	56
Figure A4-97. Probability plots for phosphate and surface modified zeolite column.....	56
Figure A4-98. Probability plots for total nitrogen and surface modified zeolite column.....	57
Figure A4-99. Probability plots for UV-254 and surface modified zeolite column.....	57
Figure A4-100. Probability plots for chloride and surface modified zeolite column.....	58
Figure A4-101. Probability plots for hardness and surface modified zeolite column.....	58
Figure A4-102. Probability plots for nitrite plus nitrate and surface modified zeolite column.....	59
Figure A4-103. Probability plots for nitrite and R and SMZ mixed media column.....	60
Figure A4-104. Probability plots for nitrate and R and SMZ mixed media column.....	60
Figure A4-105. Probability plots for ammonia and R and SMZ mixed media column.....	61
Figure A4-106. Probability plots for total phosphorus and R and SMZ mixed media column.....	61
Figure A4-107. Probability plots for COD and R and SMZ mixed media column.....	62
Figure A4-108. Probability plots for pH and R and SMZ mixed media column.....	62
Figure A4-109. Probability plots for conductivity and R and SMZ mixed media column.....	63
Figure A4-110. Probability plots for ORP and R and SMZ mixed media column.....	63
Figure A4-111. Probability plots for color and R and SMZ mixed media column.....	64
Figure A4-112. Probability plots for fluoride and R and SMZ mixed media column.....	64
Figure A4-113. Probability plots for sulfate and R and SMZ mixed media column.....	65
Figure A4-114. Probability plots for phosphate and R and SMZ mixed media column.....	65
Figure A4-115. Probability plots for total nitrogen and R and SMZ mixed media column.....	66
Figure A4-116. Probability plots for UV-254 and R and SMZ mixed media column.....	66
Figure A4-117. Probability plots for chloride and R and SMZ mixed media column.....	67
Figure A4-118. Probability plots for hardness and R and SMZ mixed media column.....	67
Figure A4-119. Probability plots for nitrite plus nitrate and R and SMZ mixed media column.....	68
Figure A4-120. Probability plots for nitrite and R-SMZ-GAC mixed media column.....	69
Figure A4-121. Probability plots for nitrate and R-SMZ-GAC mixed media column.....	69
Figure A4-122. Probability plots for ammonia and R-SMZ-GAC mixed media column.....	70
Figure A4-123. Probability plots for total phosphorus and R-SMZ-GAC mixed media column.....	70
Figure A4-124. Probability plots for COD and R-SMZ-GAC mixed media column.....	71
Figure A4-125. Probability plots for pH and R-SMZ-GAC mixed media column.....	71
Figure A4-126. Probability plots for conductivity and R-SMZ-GAC mixed media column.....	72
Figure A4-127. Probability plots for ORP and R-SMZ-GAC mixed media column.....	72
Figure A4-128. Probability plots for color and R-SMZ-GAC mixed media column.....	73
Figure A4-129. Probability plots for fluoride and R-SMZ-GAC mixed media column.....	73
Figure A4-130. Probability plots for sulfate and R-SMZ-GAC mixed media column.....	74
Figure A4-131. Probability plots for phosphate and R-SMZ-GAC mixed media column.....	74
Figure A4-132. Probability plots for total nitrogen and R-SMZ-GAC mixed media column.....	75
Figure A4-133. Probability plots for UV-254 and R-SMZ-GAC mixed media column.....	75
Figure A4-134. Probability plots for chloride and R-SMZ-GAC mixed media column.....	76
Figure A4-135. Probability plots for hardness and R-SMZ-GAC mixed media column.....	76
Figure A4-136. Probability plots for nitrite plus nitrate and R-SMZ-GAC mixed media column.....	77

Figure A4-137. Probability plots for nitrite and R-SMZ-GAC-PM mixed media column.	78
Figure A4-138. Probability plots for nitrate and R-SMZ-GAC-PM mixed media column.	78
Figure A4-139. Probability plots for ammonia and R-SMZ-GAC-PM mixed media column.	79
Figure A4-140. Probability plots for total phosphate and R-SMZ-GAC-PM mixed media column.	79
Figure A4-141. Probability plots for COD and R-SMZ-GAC-PM mixed media column.	80
Figure A4-142. Probability plots for pH and R-SMZ-GAC-PM mixed media column.	80
Figure A4-143. Probability plots for conductivity and R-SMZ-GAC-PM mixed media column.	81
Figure A4-144. Probability plots for ORP and R-SMZ-GAC-PM mixed media column.	81
Figure A4-145. Probability plots for color and R-SMZ-GAC-PM mixed media column.	82
Figure A4-146. Probability plots for fluoride and R-SMZ-GAC-PM mixed media column.	82
Figure A4-147. Probability plots for sulfate and R-SMZ-GAC-PM mixed media column.	83
Figure A4-148. Probability plots for phosphate and R-SMZ-GAC-PM mixed media column.	83
Figure A4-149. Probability plots for total nitrogen and R-SMZ-GAC-PM mixed media column.	84
Figure A4-150. Probability plots for UV-254 and R-SMZ-GAC-PM mixed media column.	84
Figure A4-151. Probability plots for chloride and R-SMZ-GAC-PM mixed media column.	85
Figure A4-152. Probability plots for hardness and R-SMZ-GAC-PM mixed media column.	85
Figure A4-153. Probability plots for nitrite plus nitrate and R-SMZ-GAC-PM mixed media column.	86
Figure A4-154. Probability plots for nitrite and sand, zeolite, GAC layered media column.	87
Figure A4-155. Probability plots for ammonia and sand, zeolite, GAC layered media column.	87
Figure A4-156. Probability plots for total phosphate and sand, zeolite, GAC layered media column.	88
Figure A4-157. Probability plots for COD and sand, zeolite, GAC layered media column.	88
Figure A4-158. Probability plots for pH and sand, zeolite, GAC layered media column.	89
Figure A4-159. Probability plots for conductivity and sand, zeolite, GAC layered media column.	89
Figure A4-160. Probability plots for ORP and sand, zeolite, GAC layered media column.	90
Figure A4-161. Probability plots for color and sand, zeolite, GAC layered media column.	90
Figure A4-162. Probability plots for nitrate and sand, zeolite, GAC layered media column.	91
Figure A4-163. Probability plots for nitrite and sand, zeolite, GAC layered media column.	91
Figure A4-164. Probability plots for sulfate and sand, zeolite, GAC layered media column.	92
Figure A4-165. Probability plots for phosphate and sand, zeolite, GAC layered media column.	92
Figure A4-166. Probability plots for total nitrogen and sand, zeolite, GAC layered media column.	93
Figure A4-167. Probability plots for UV-254 and sand, zeolite, GAC layered media column.	93
Figure A4-168. Probability plots for chloride and sand, zeolite, GAC layered media column.	94
Figure A4-169. Probability plots for hardness and sand, zeolite, GAC layered media column.	94
Figure A4-170. Probability plots for nitrite plus nitrate and sand, zeolite, GAC layered media column.	95

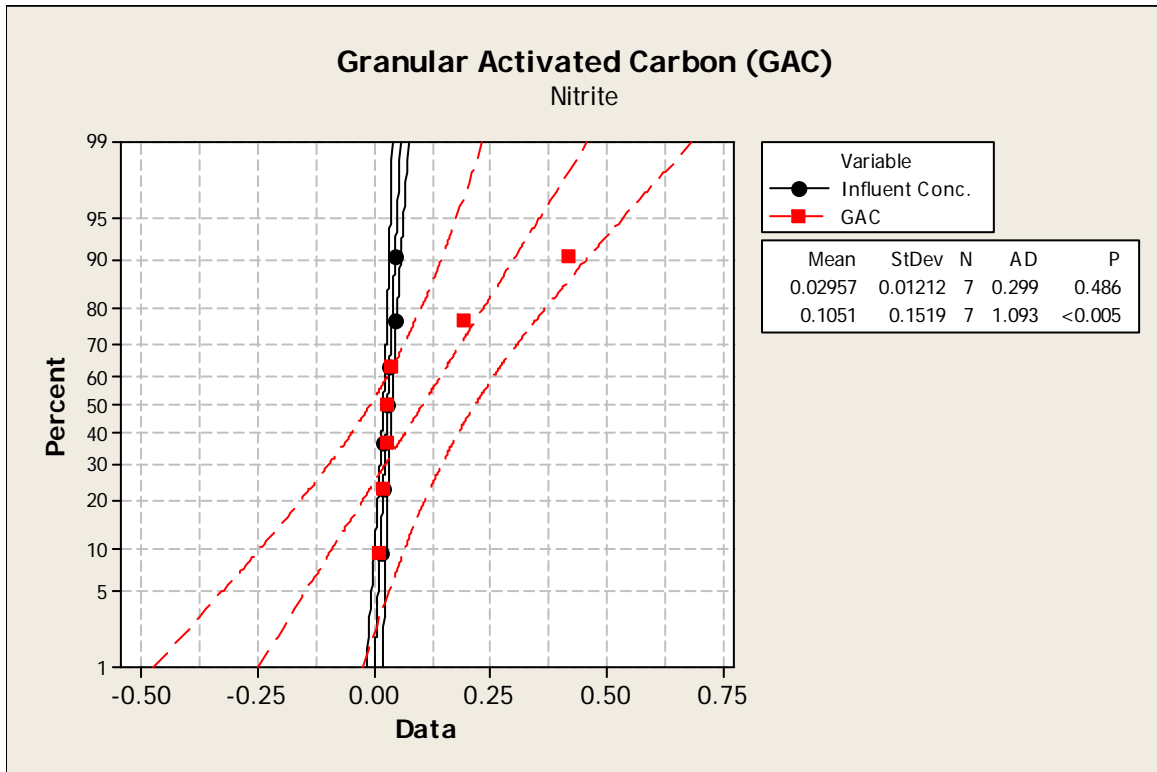


Figure A4-1. Probability plots for nitrite and granular activated carbon column.

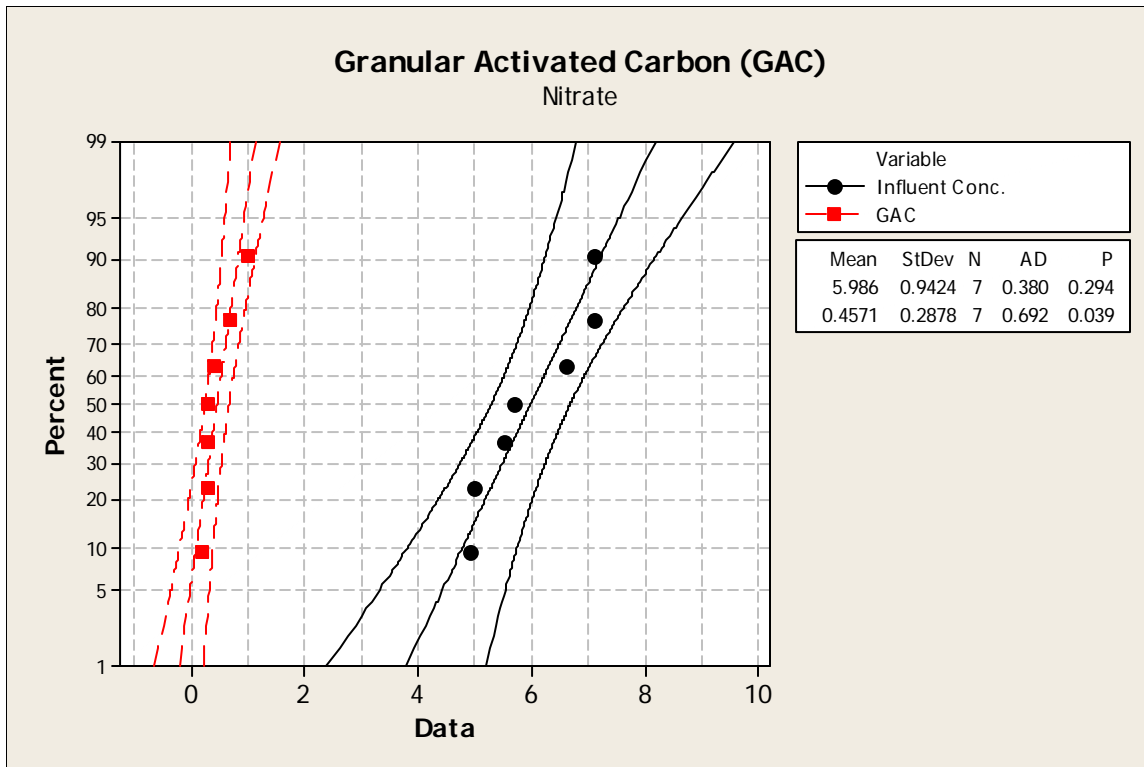


Figure A4-2. Probability plots for nitrate and granular activated carbon column.

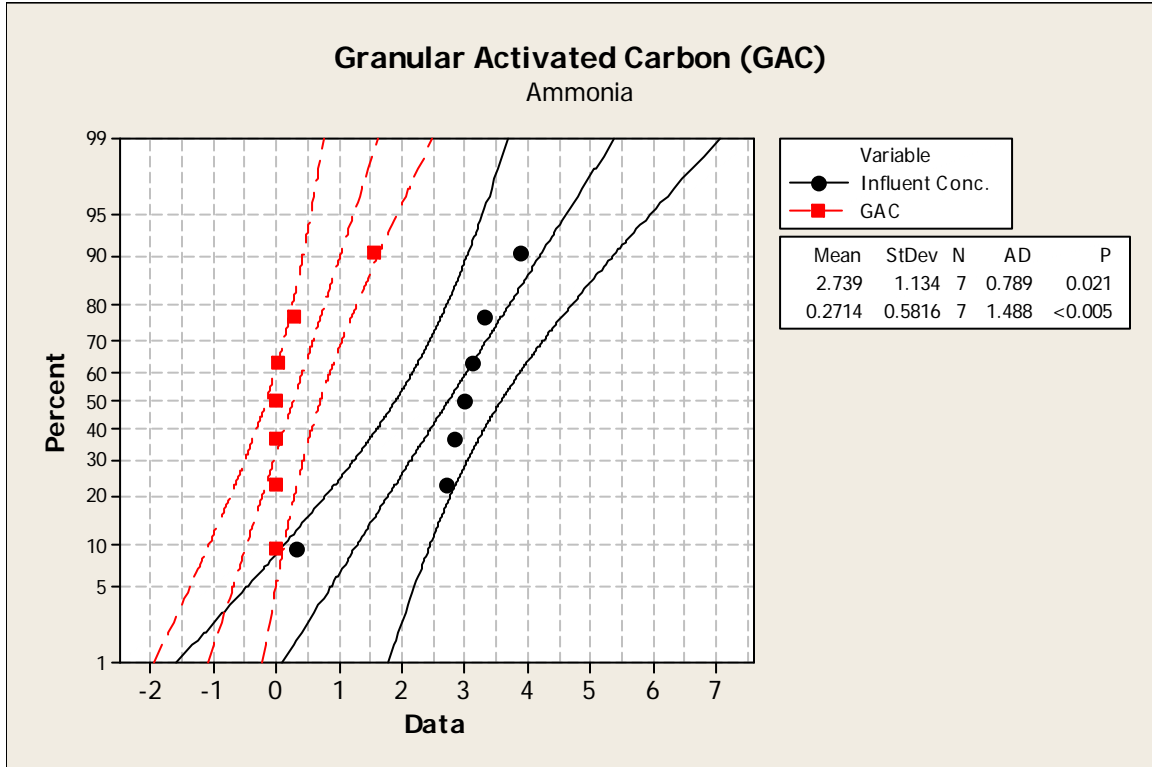


Figure A4-3. Probability plots for ammonia and granular activated carbon column.

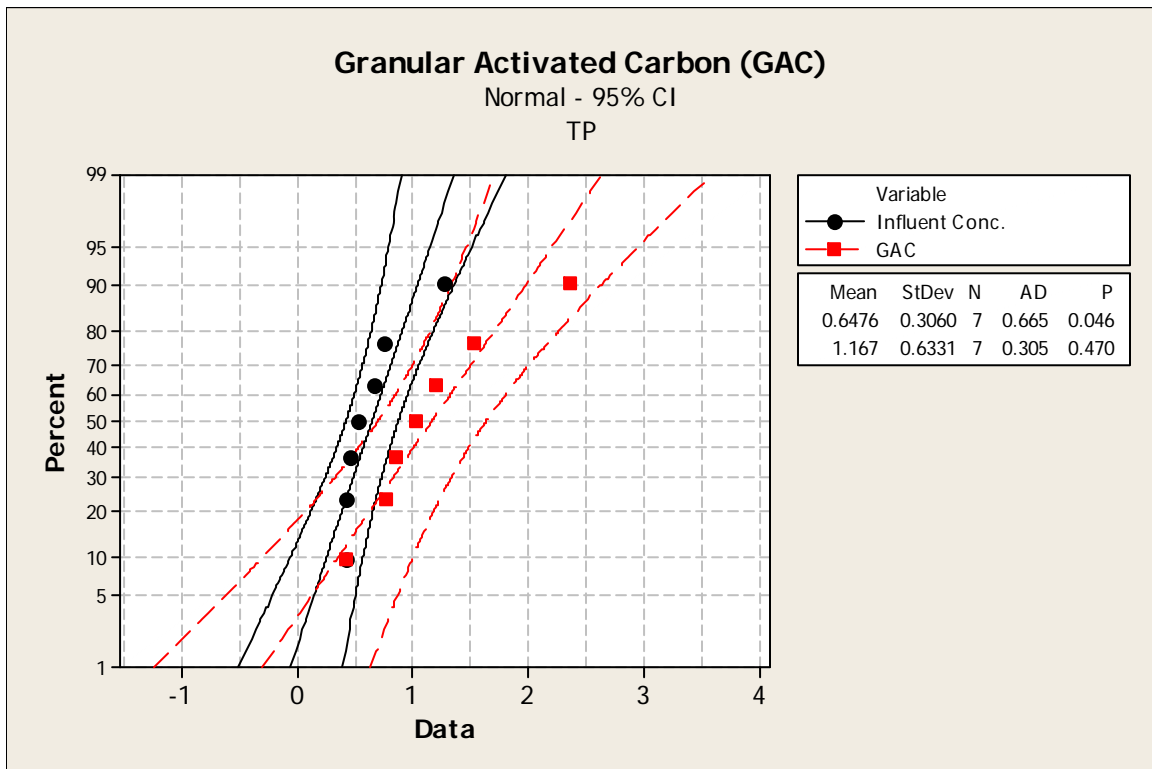


Figure A4-4. Probability plots for total phosphorus and granular activated carbon column.

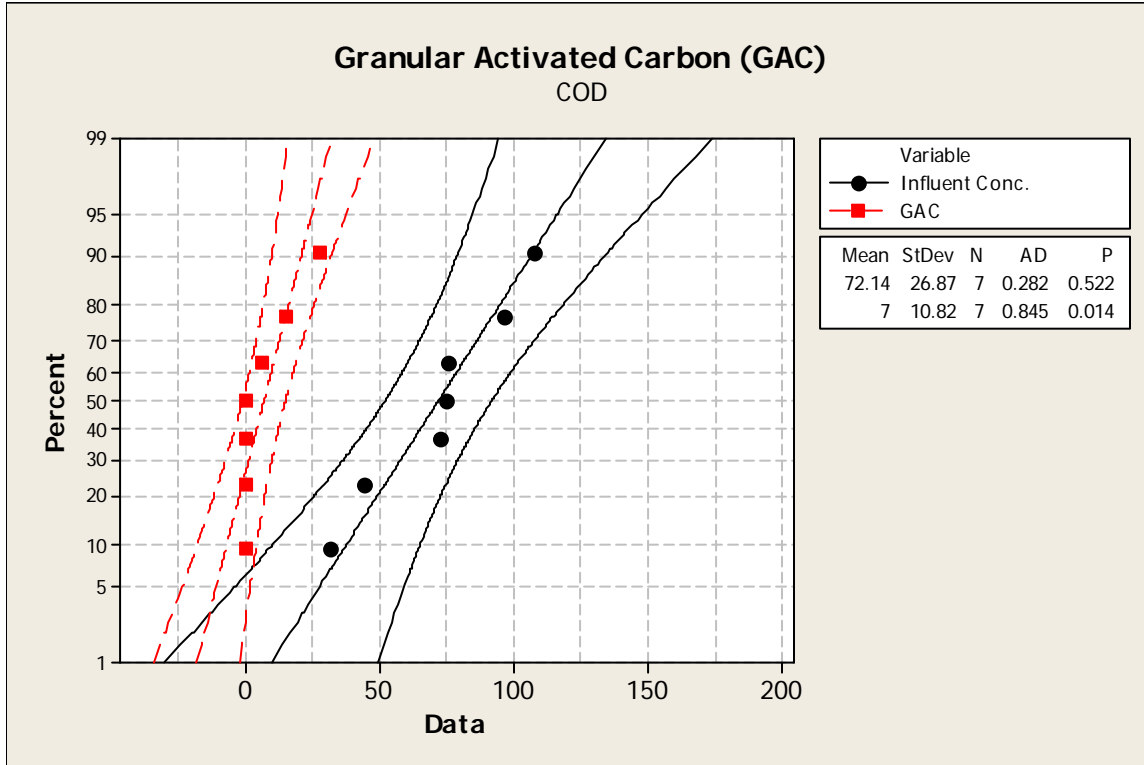


Figure A4-5. Probability plots for COD and granular activated carbon column.

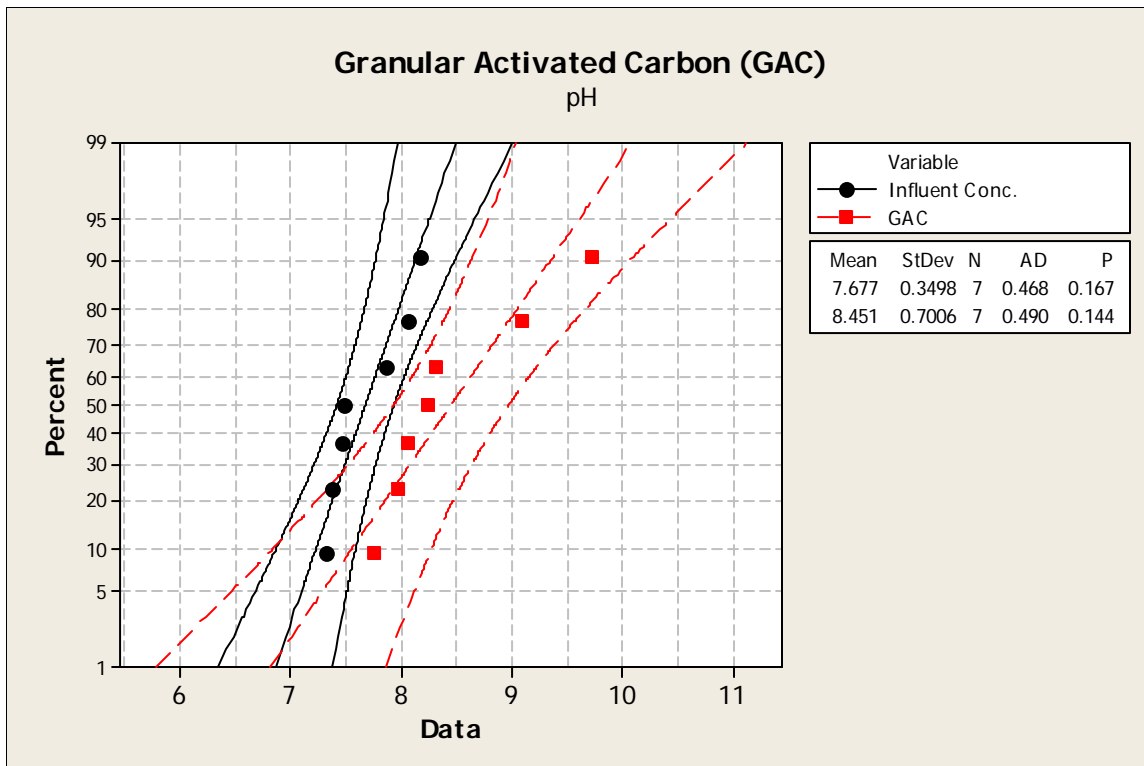


Figure A4-6. Probability plots for pH and granular activated carbon column.

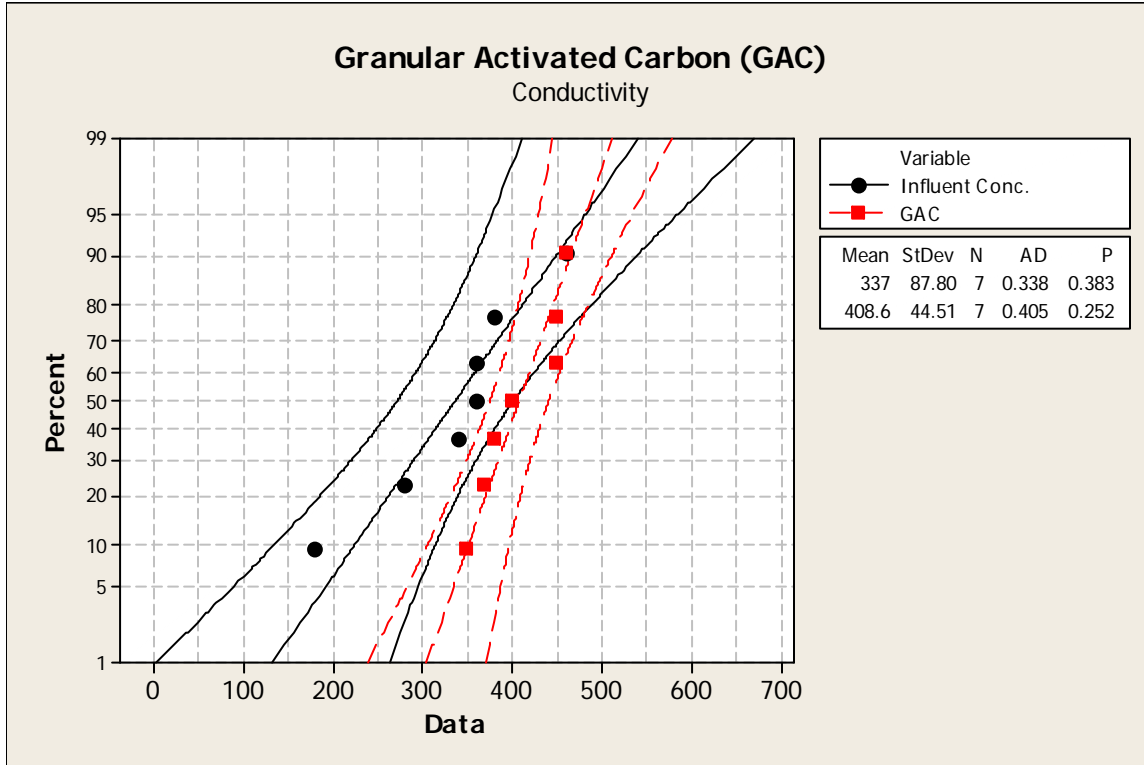


Figure A4-7. Probability plots for conductivity and granular activated carbon column.

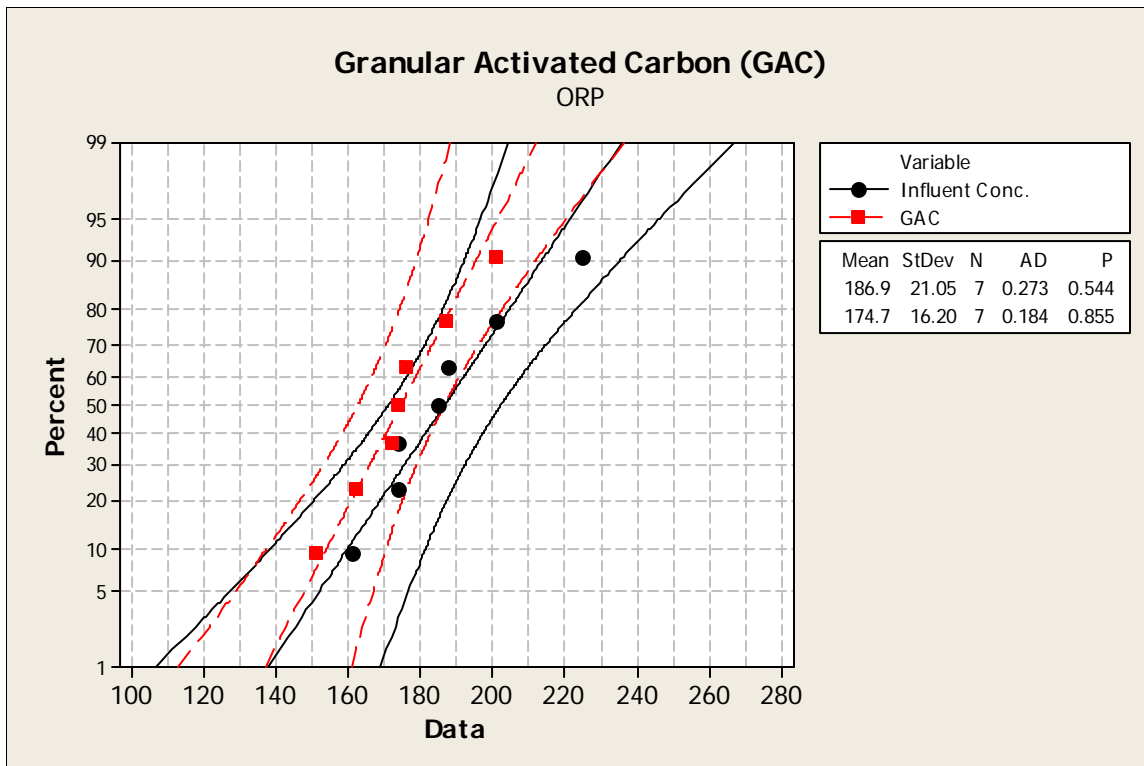


Figure A4-12. Probability plots for phosphate and granular activated carbon column.

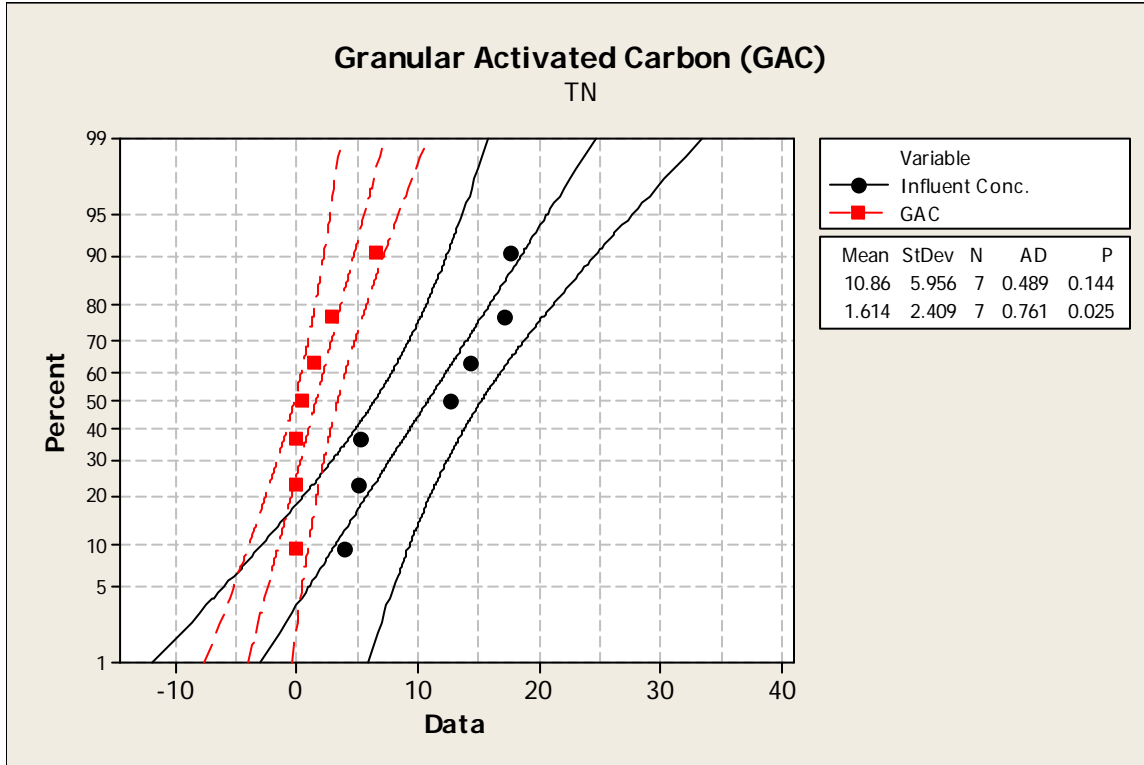


Figure A4-13. Probability plots for total nitrogen and granular activated carbon column.

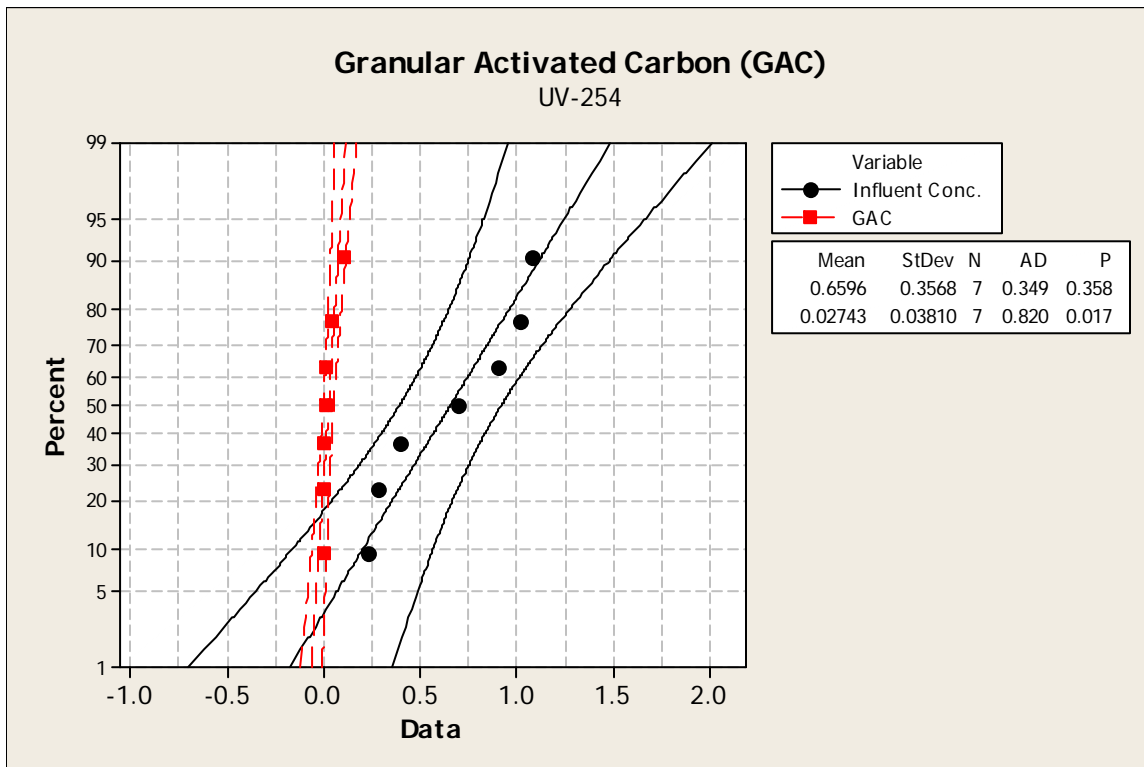


Figure A4-14. Probability plots for UV-254 and granular activated carbon column.

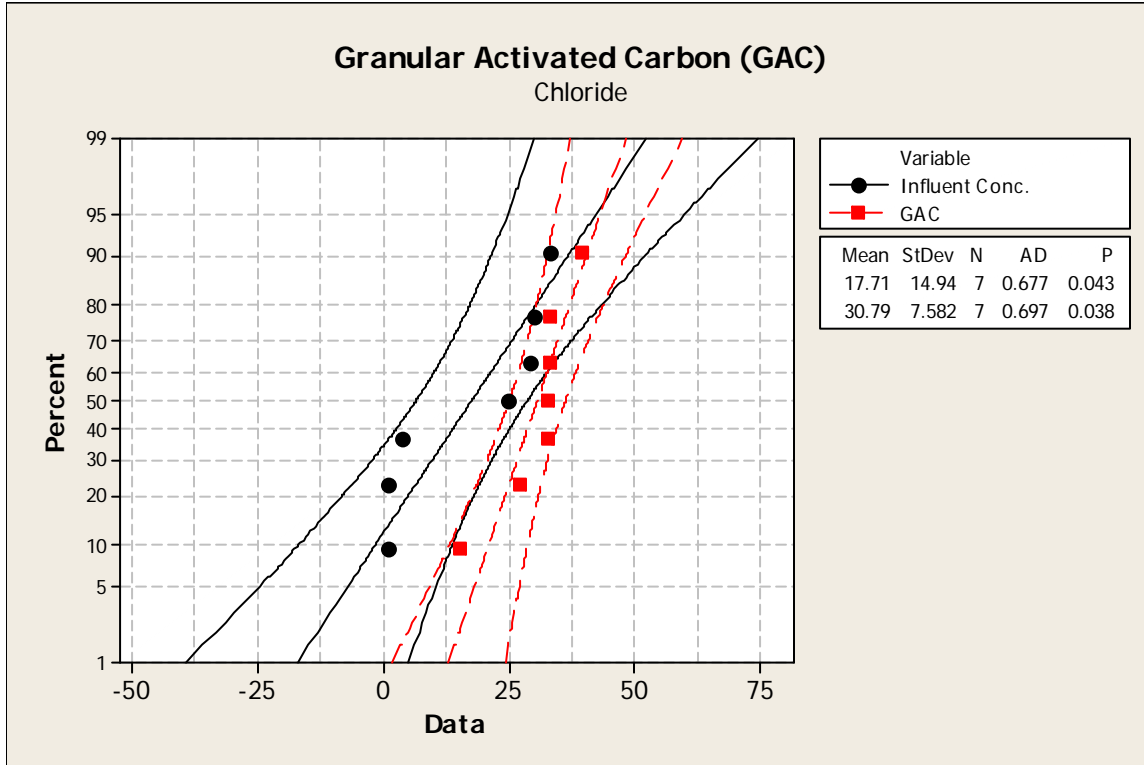


Figure A4-15. Probability plots for chloride and granular activated carbon column.

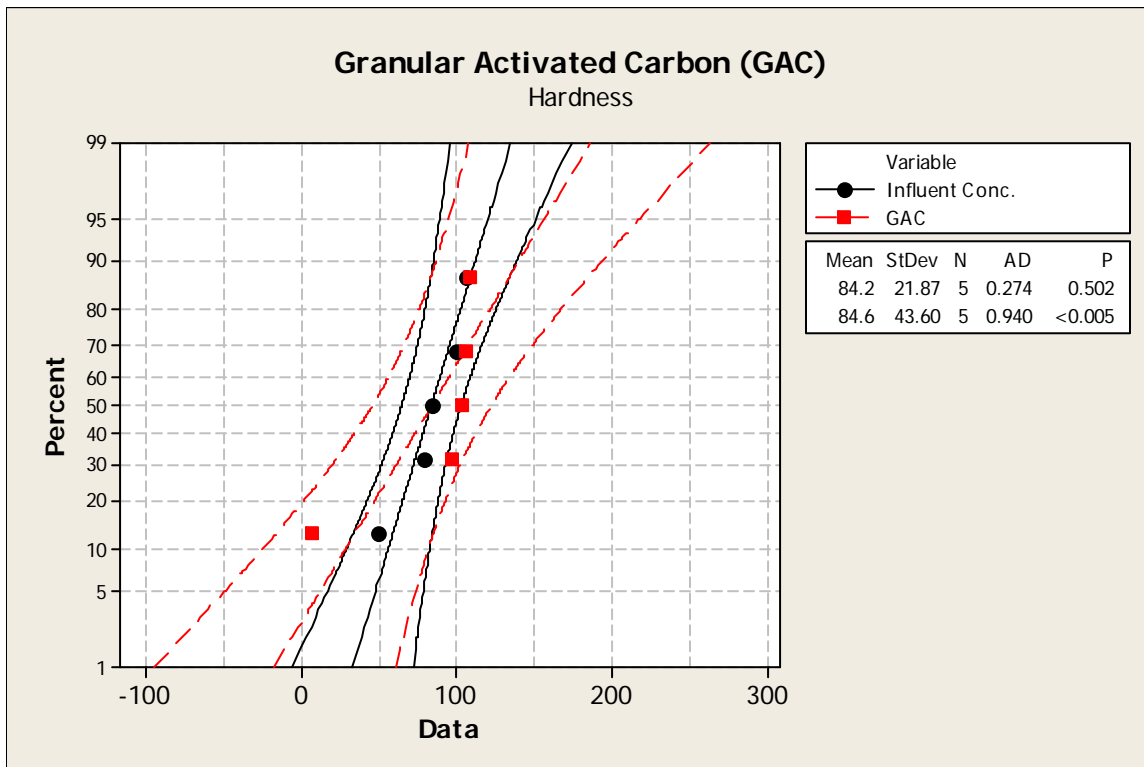


Figure A4-16. Probability plots for hardness and granular activated carbon column.

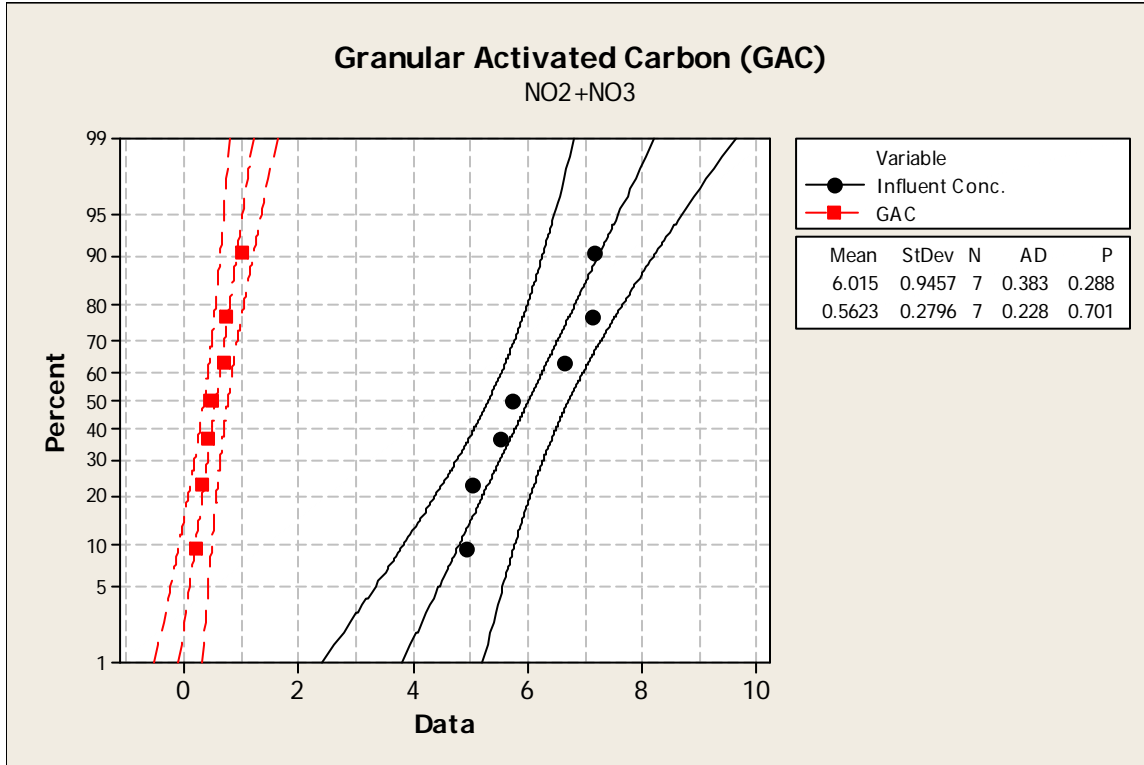


Figure A4-17. Probability plots for nitrite plus nitrate and granular activated carbon column.

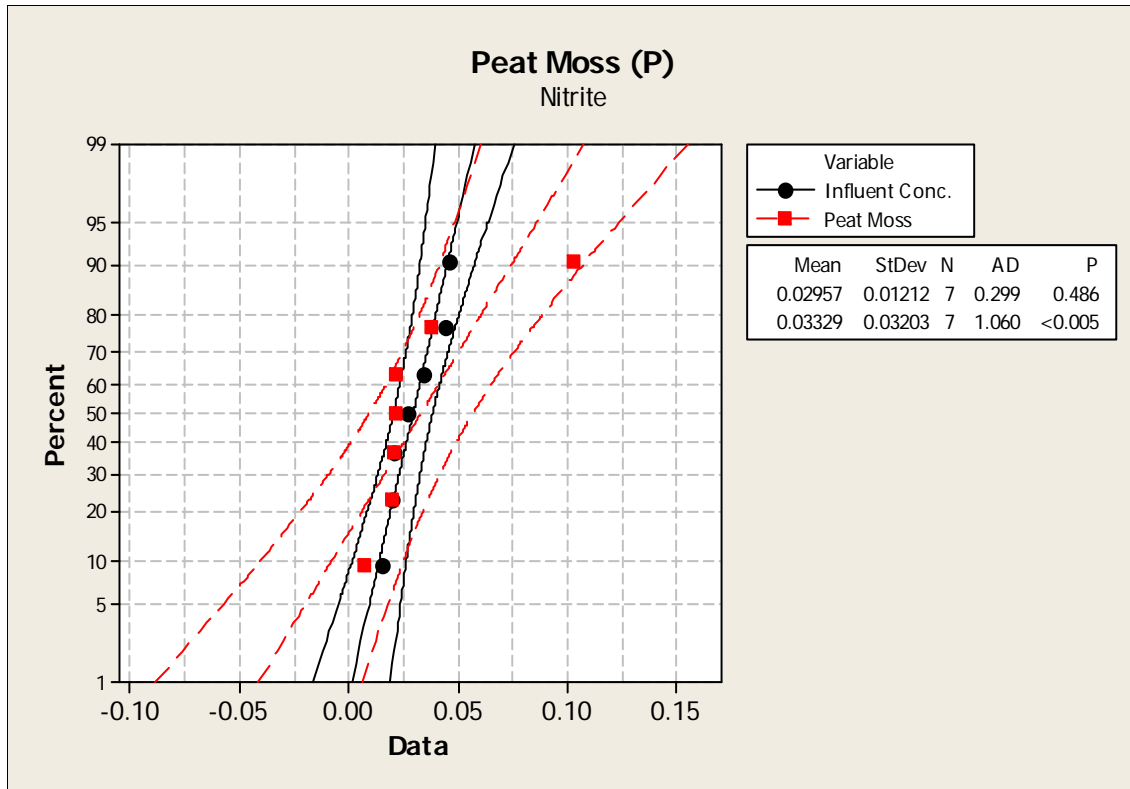


Figure A4-18. Probability plots for nitrite and peat moss column.

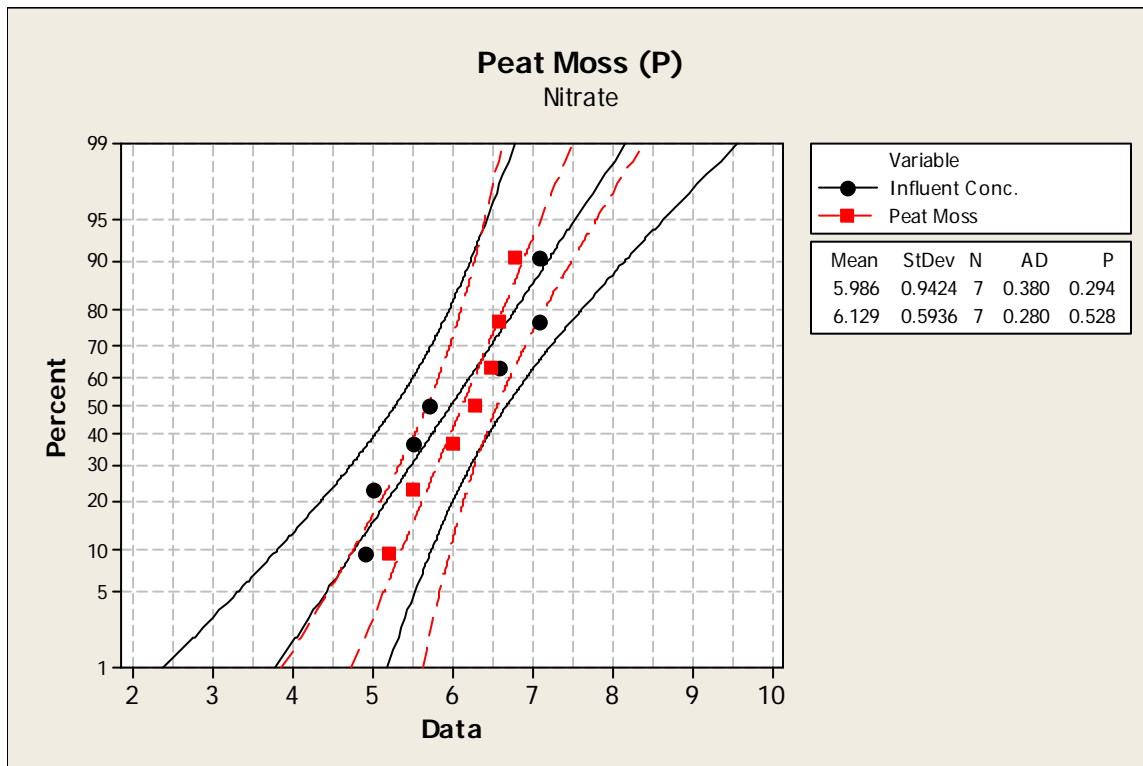


Figure A4-19. Probability plots for nitrate and peat moss column.

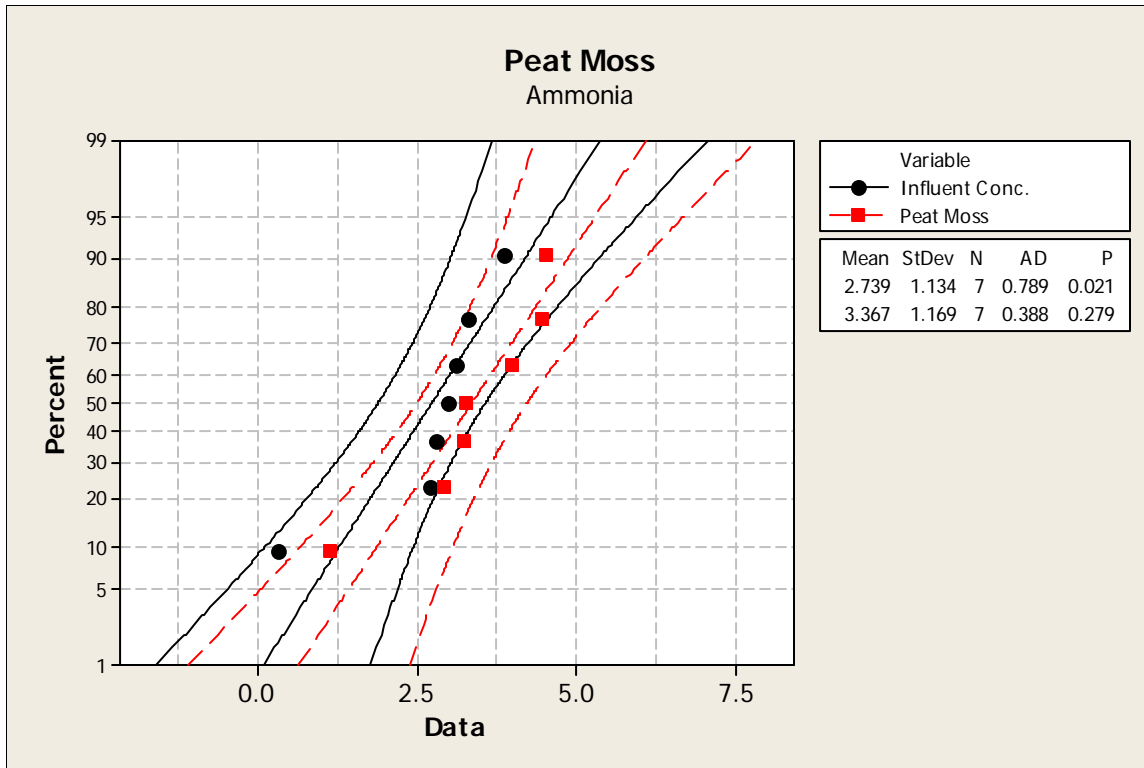


Figure A4-20. Probability plots for ammonia and peat moss column.

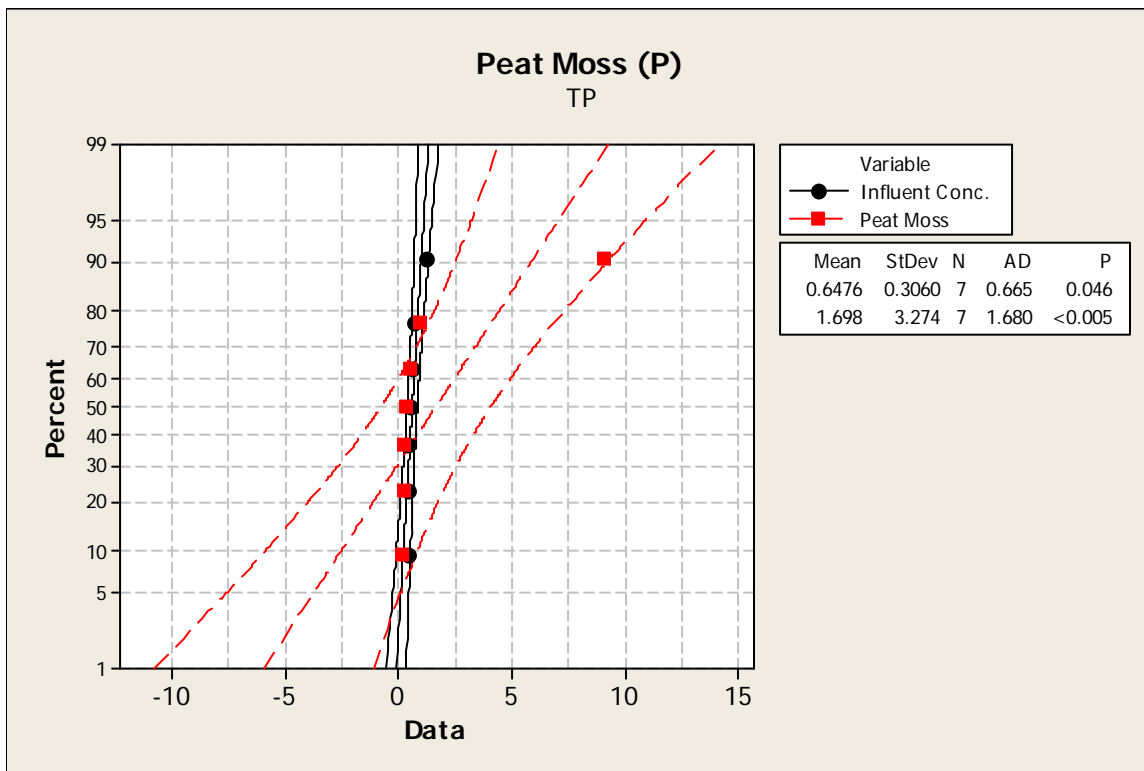


Figure A4-21. Probability plots for total phosphate and peat moss column.

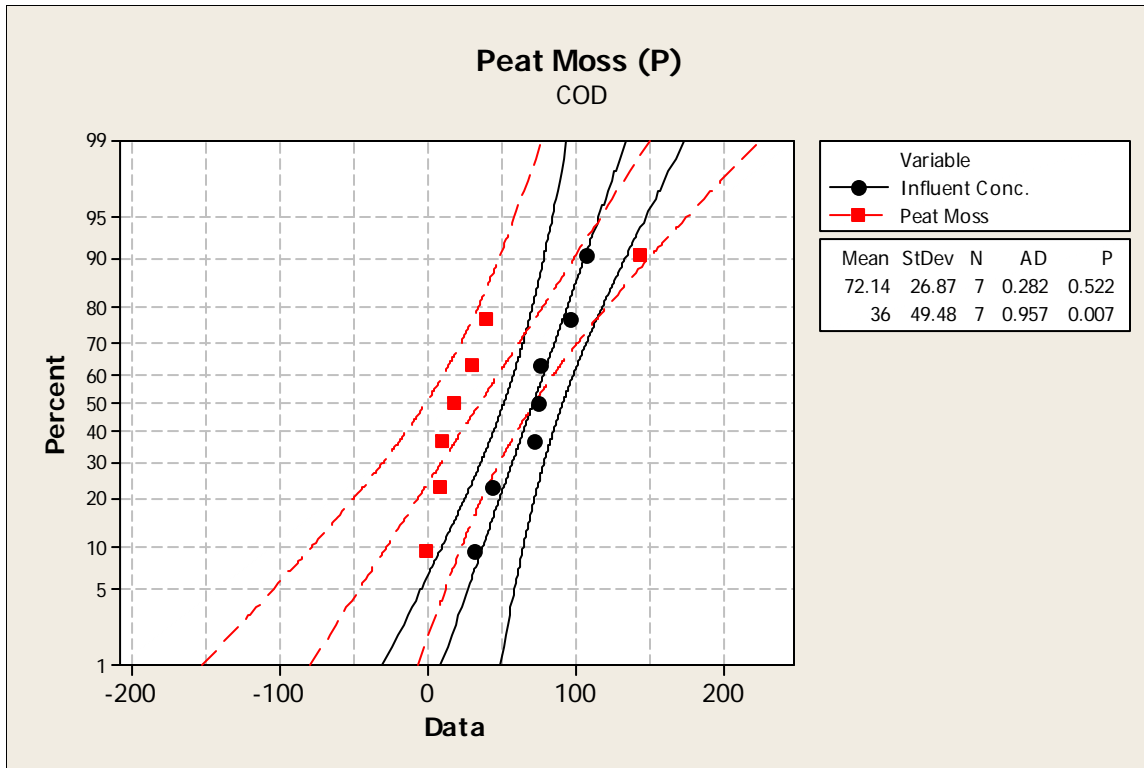


Figure A4-22. Probability plots for COD and peat moss column.

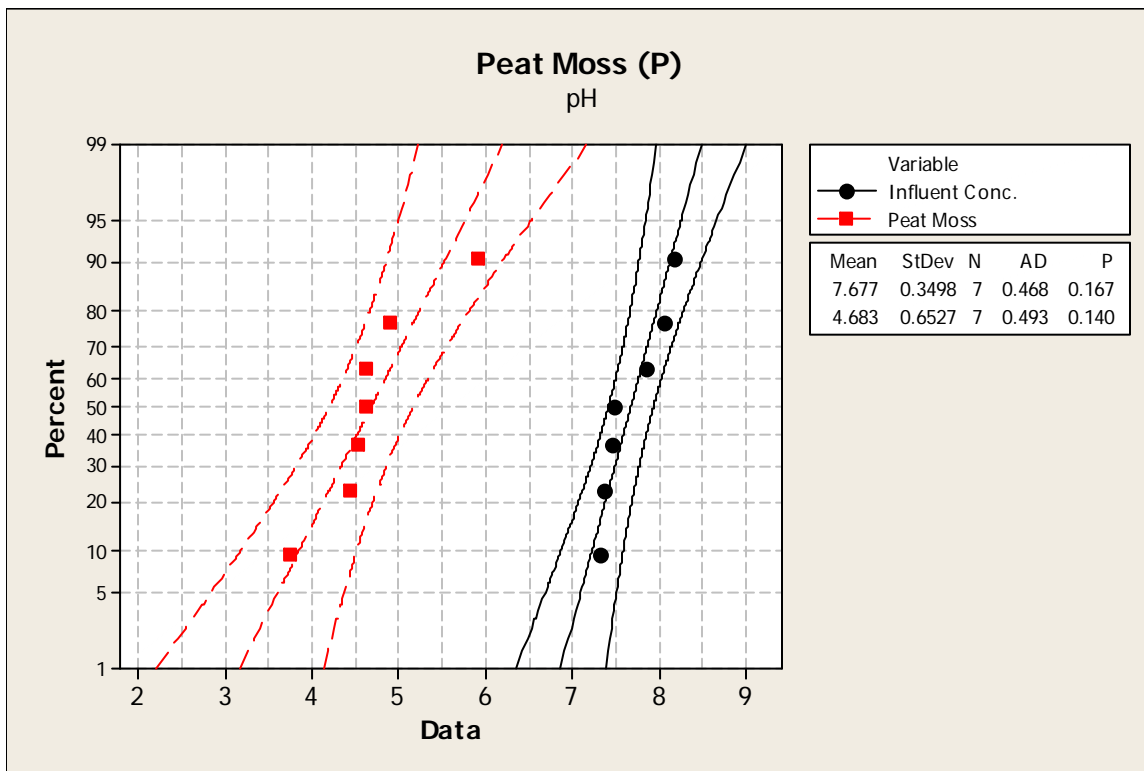


Figure A4-23. Probability plots for pH and peat moss column.

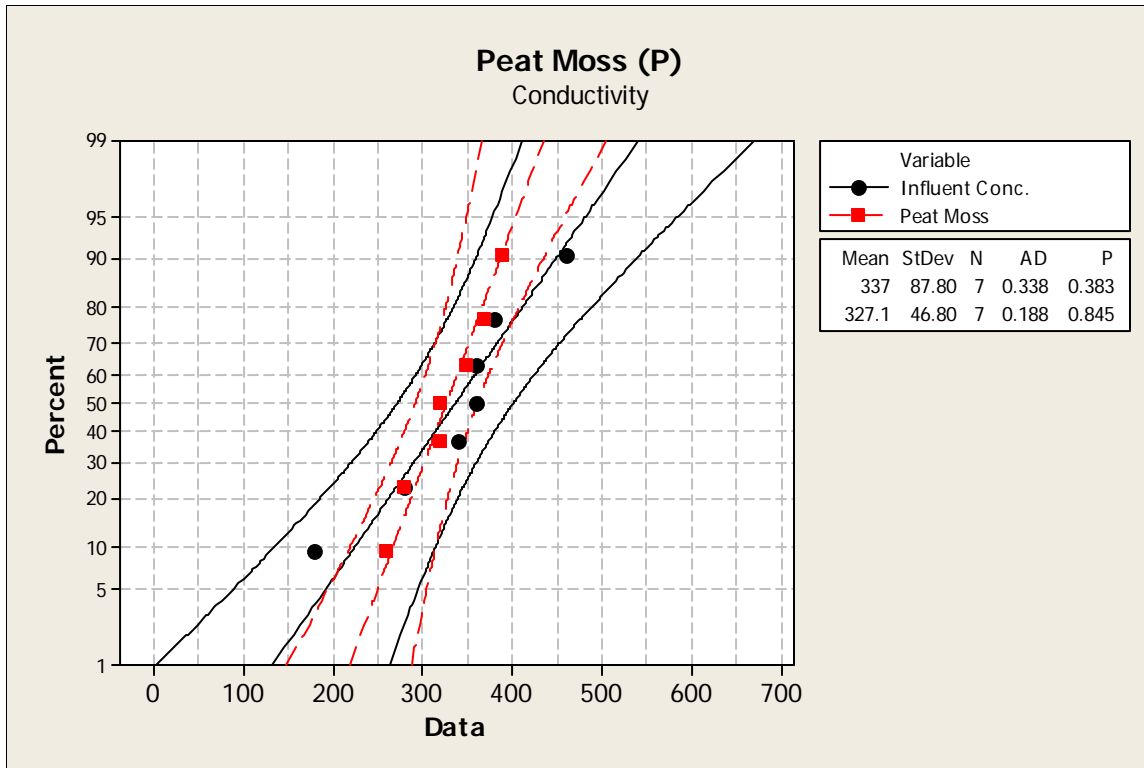


Figure A4-24. Probability plots for conductivity and peat moss column.

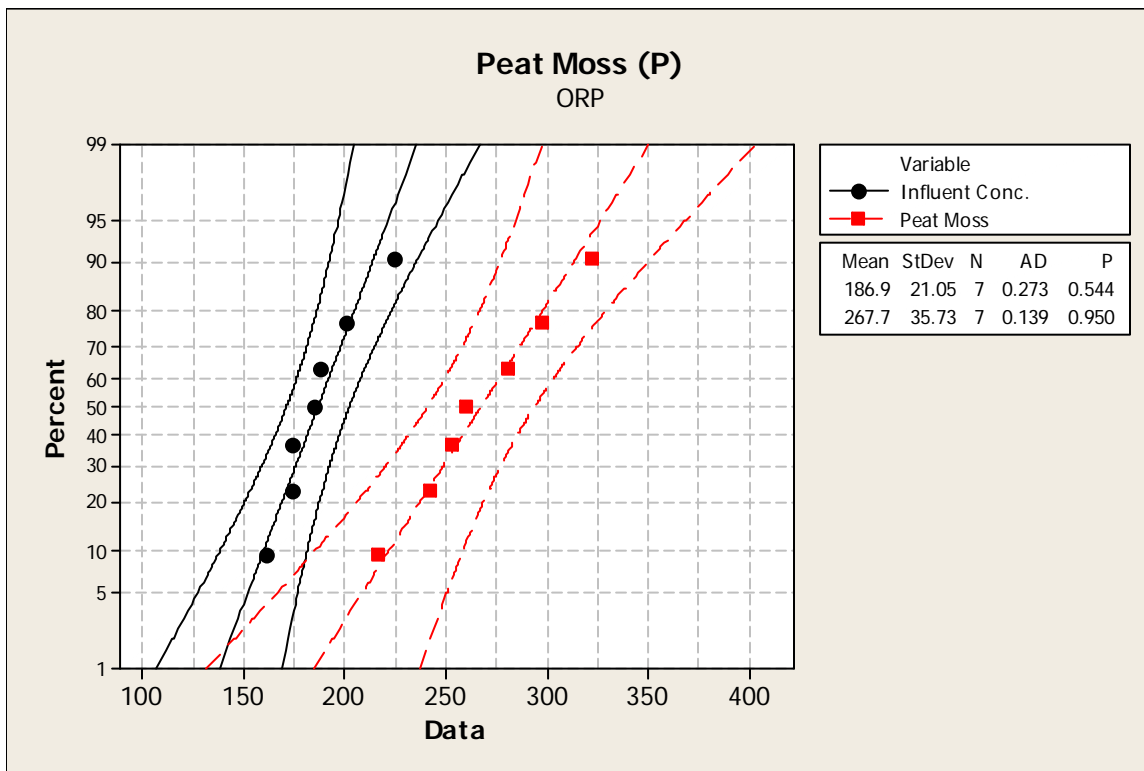


Figure A4-25. Probability plots for ORP and peat moss column.

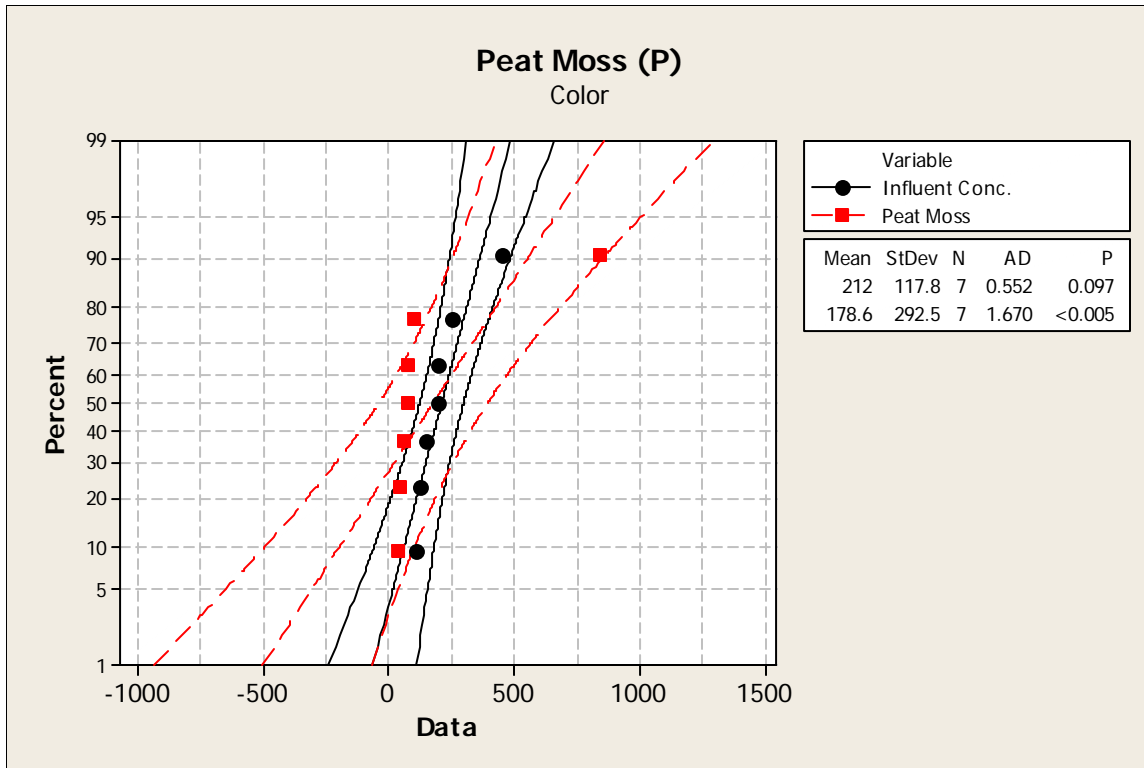


Figure A4-26. Probability plots for color and peat moss column.

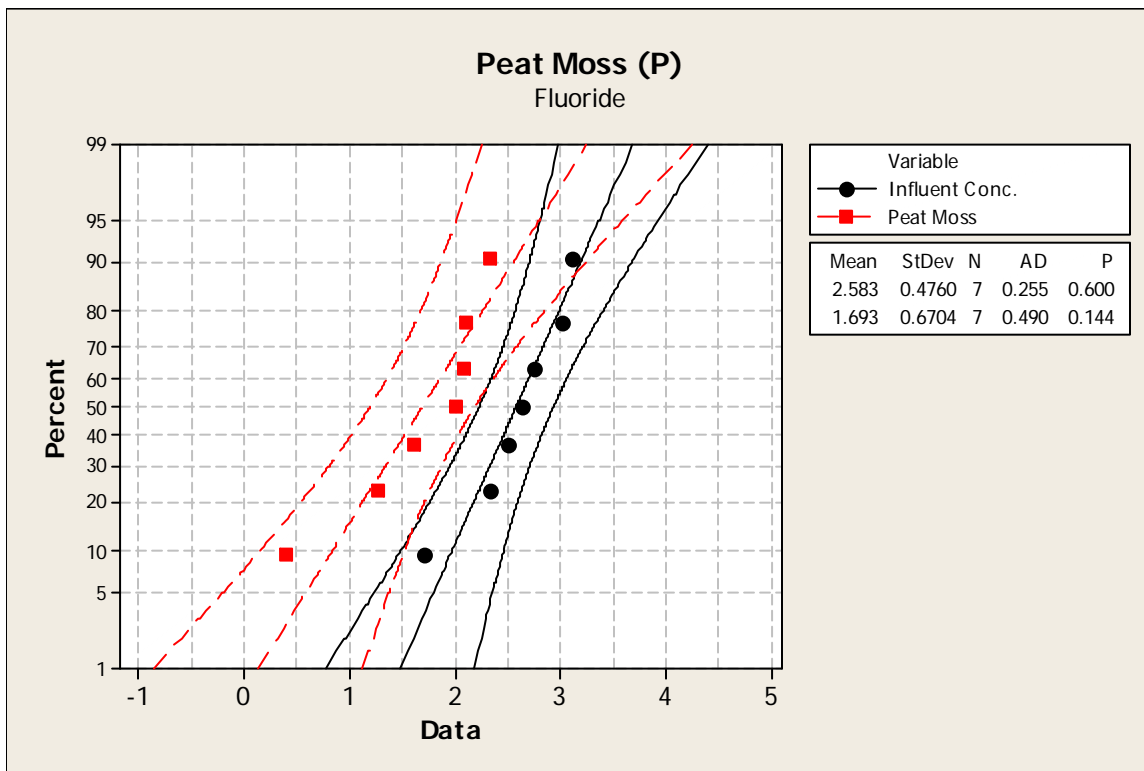


Figure A4-27. Probability plots for fluoride and peat moss column.

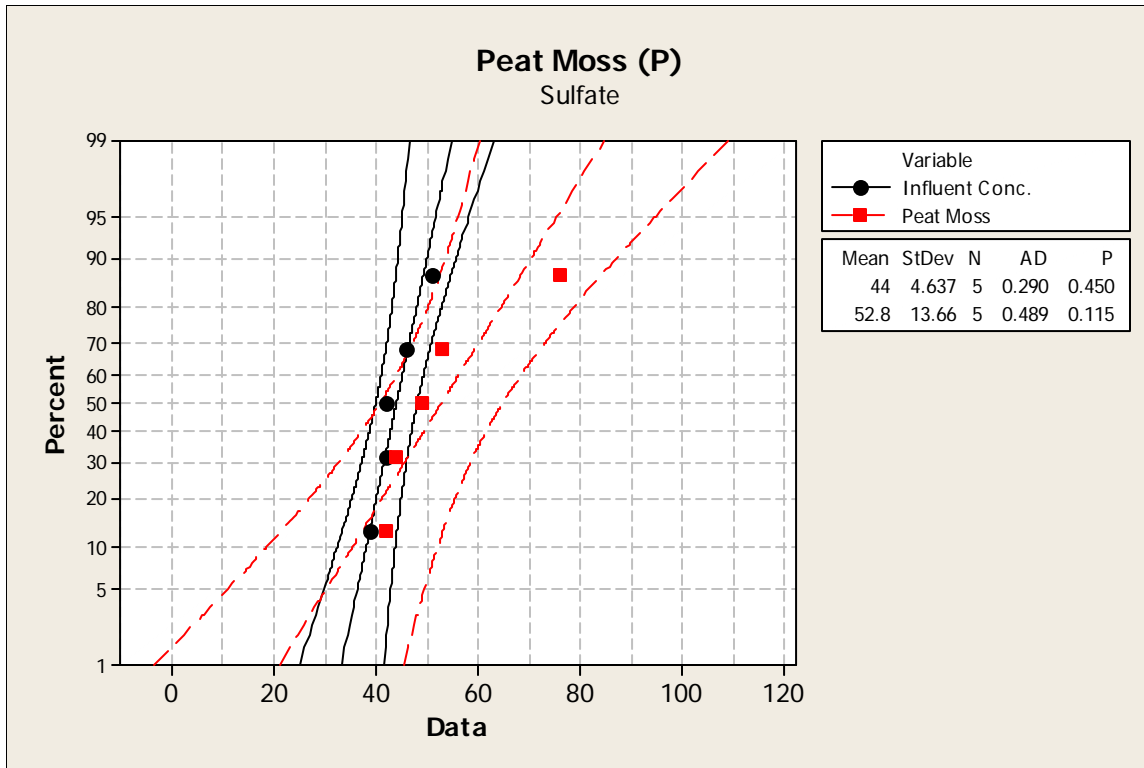


Figure A4-28. Probability plots for sulfate and peat moss column.

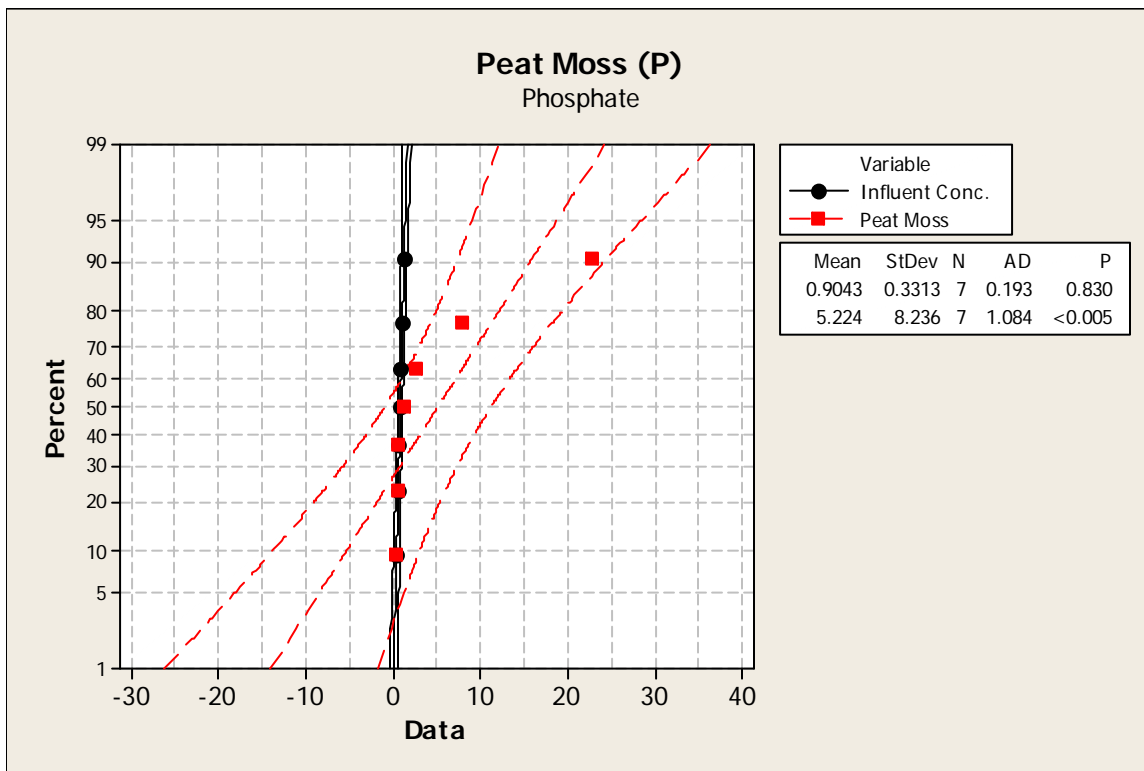


Figure A4-29. Probability plots for phosphate and peat moss column.

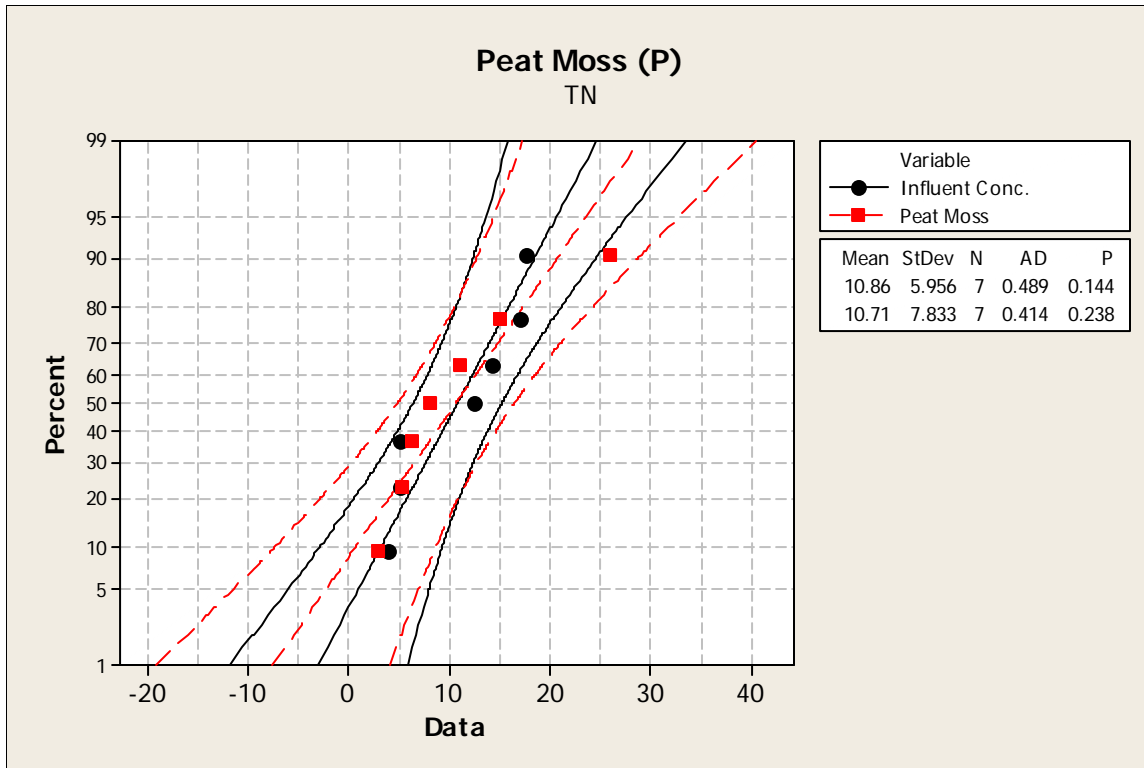


Figure A4-30. Probability plots for total nitrogen and peat moss column.

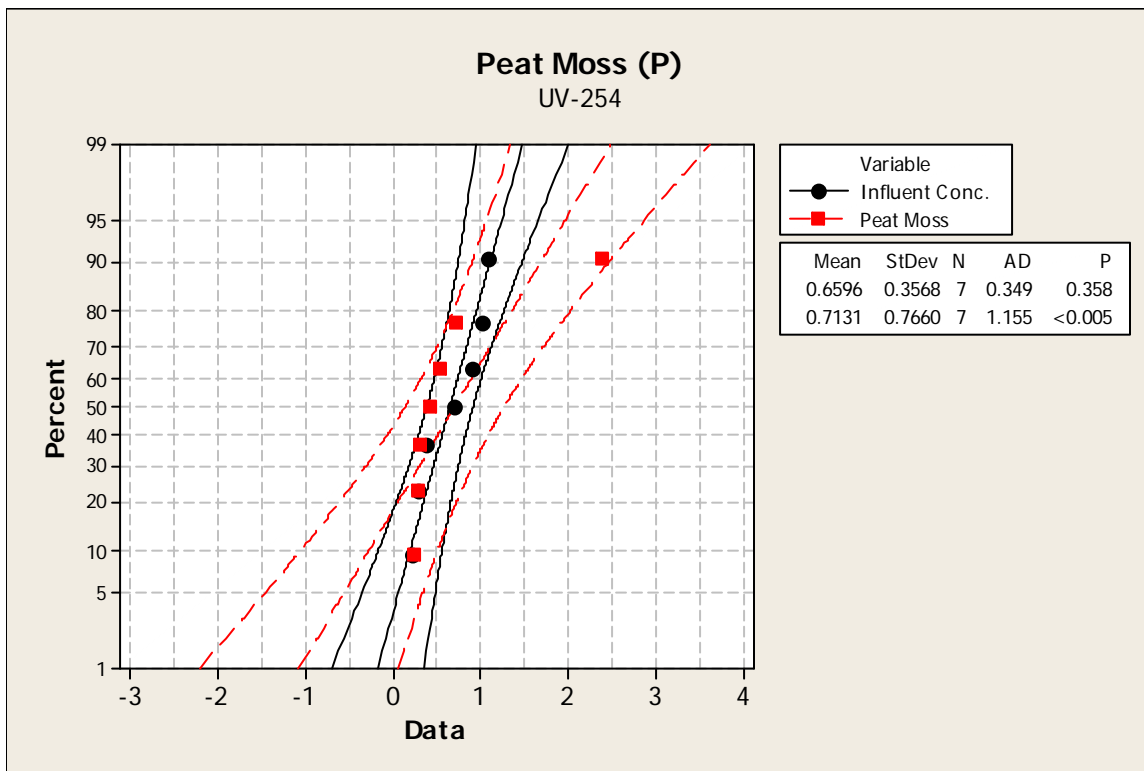


Figure A4-31. Probability plots for UV-254 and peat moss column.

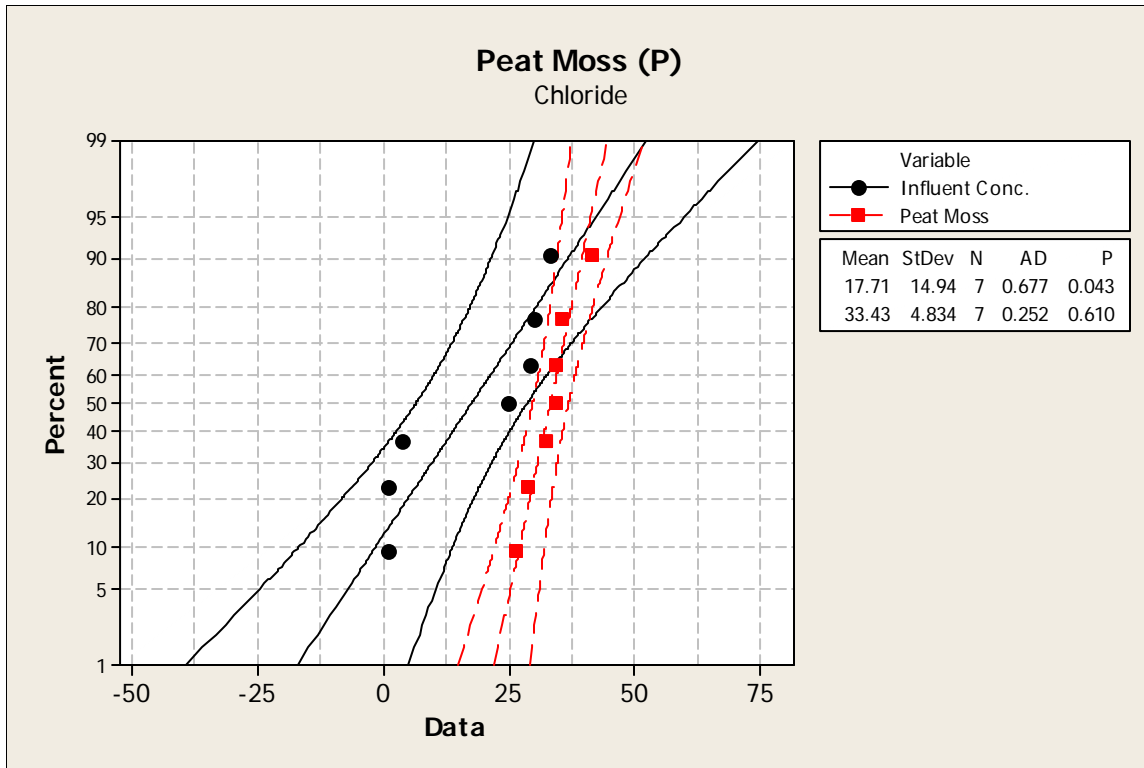


Figure A4-32. Probability plots for chloride and peat moss column.

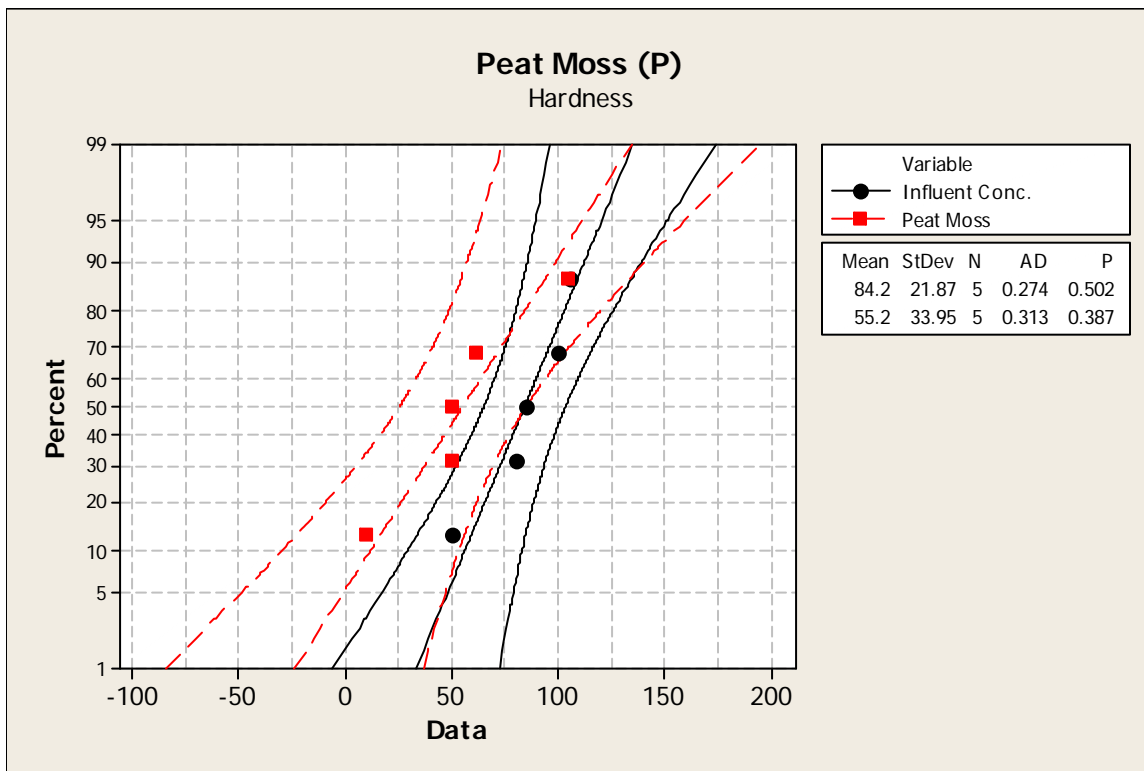


Figure A4-33. Probability plots for hardness and peat moss column.

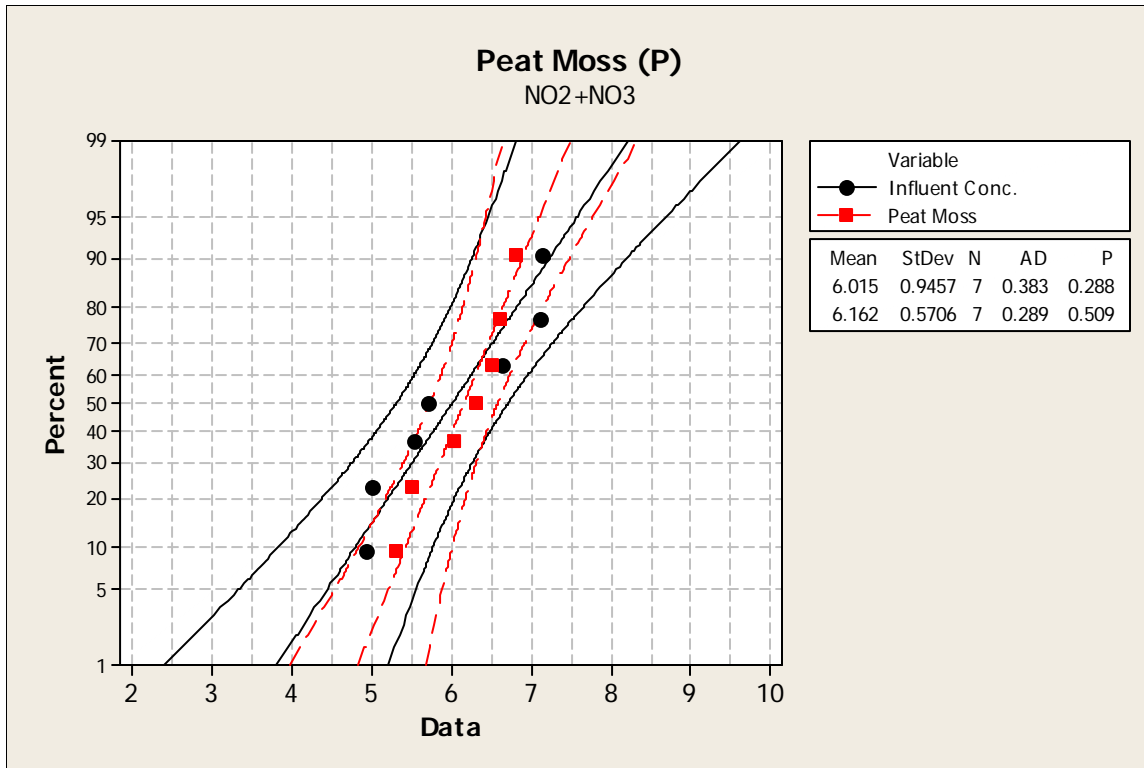


Figure A4-34. Probability plots for nitrite plus nitrate and peat moss column.

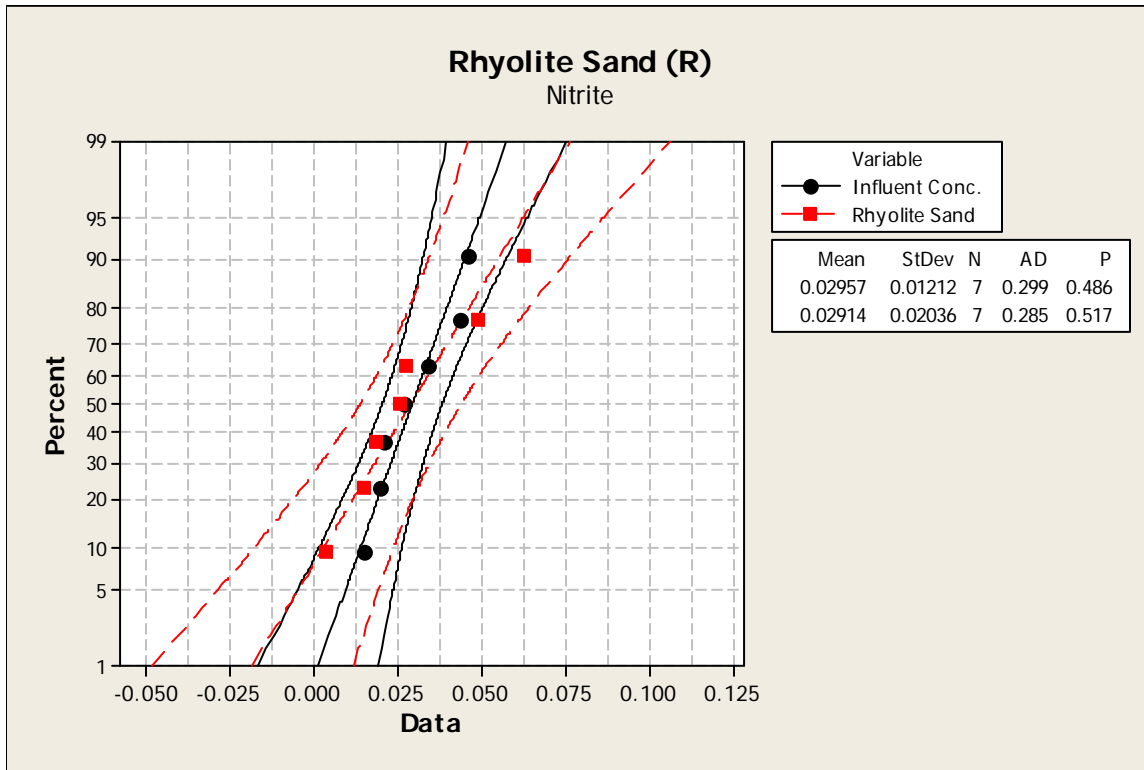


Figure A4-35. Probability plots for nitrite and Rhyolite sand column.

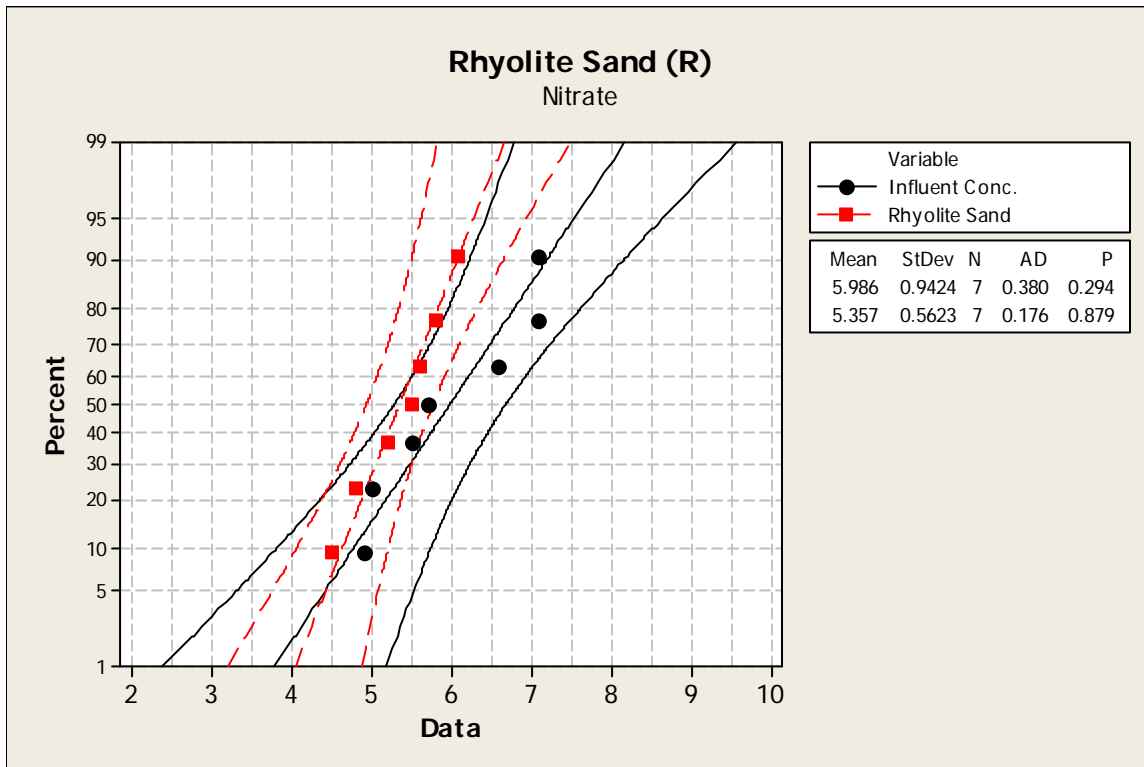


Figure A4-36. Probability plots for nitrate and Rhyolite sand column.

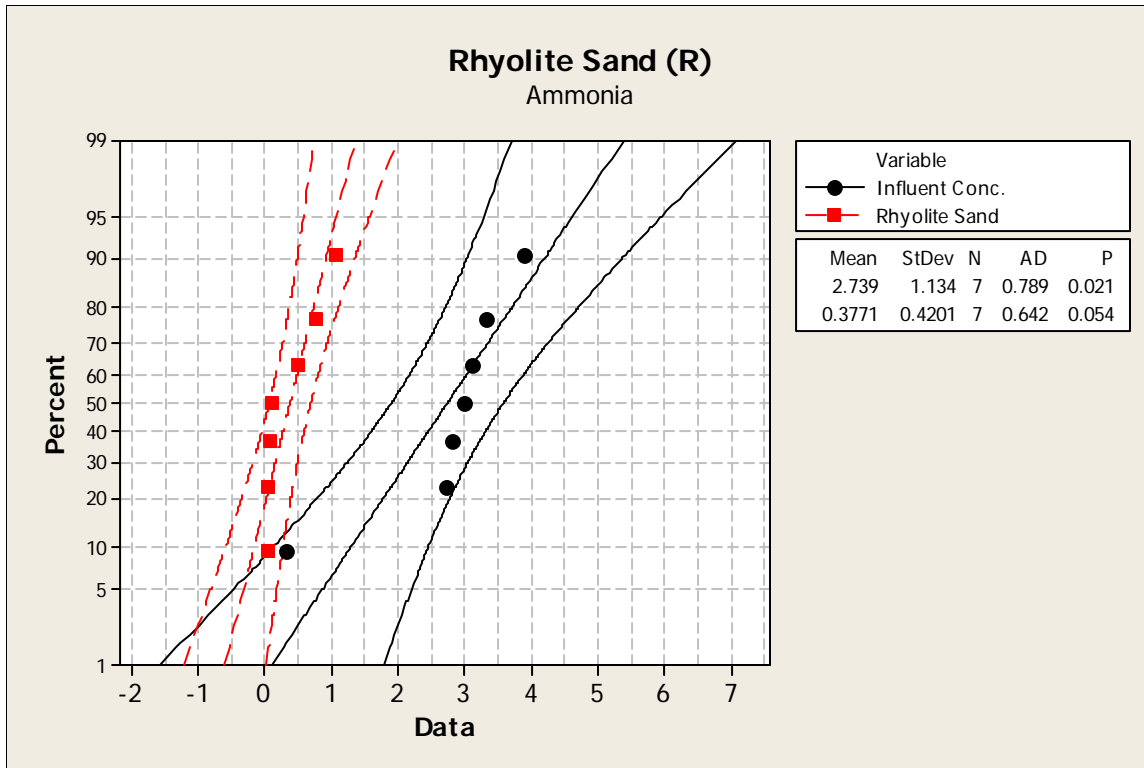


Figure A4-37. Probability plots for ammonia and Rhyolite sand column.

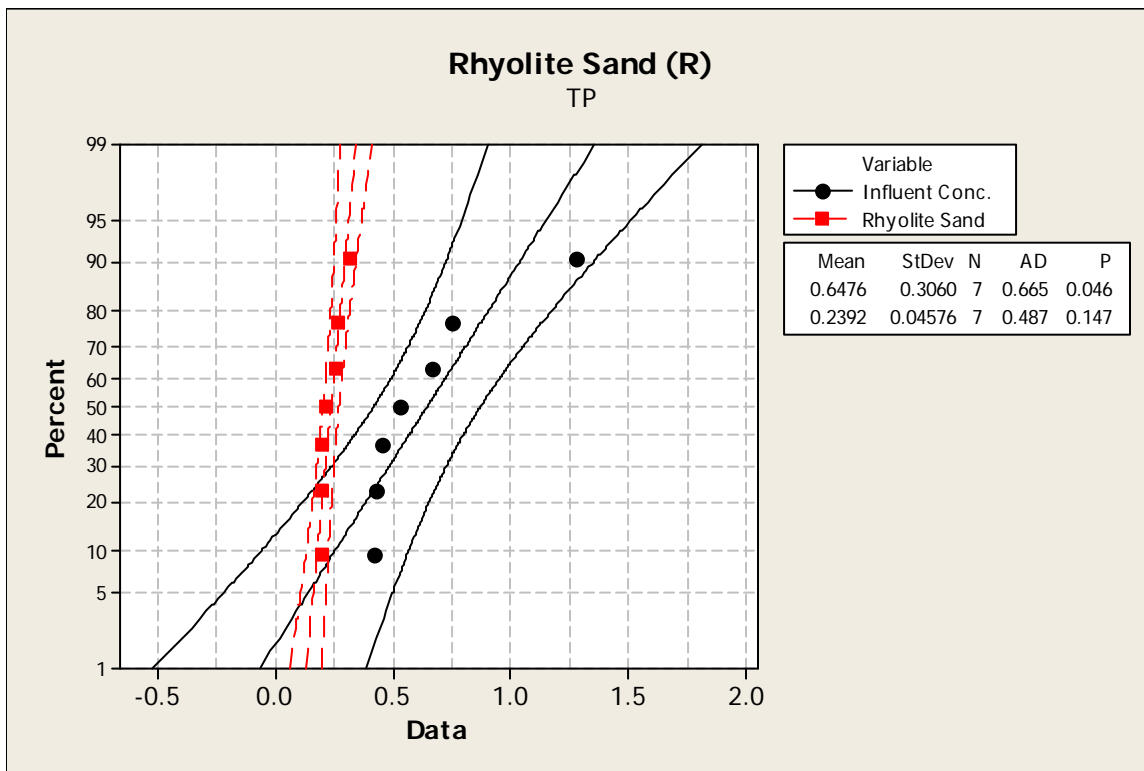


Figure A4-38. Probability plots for total phosphorus and Rhyolite sand column.

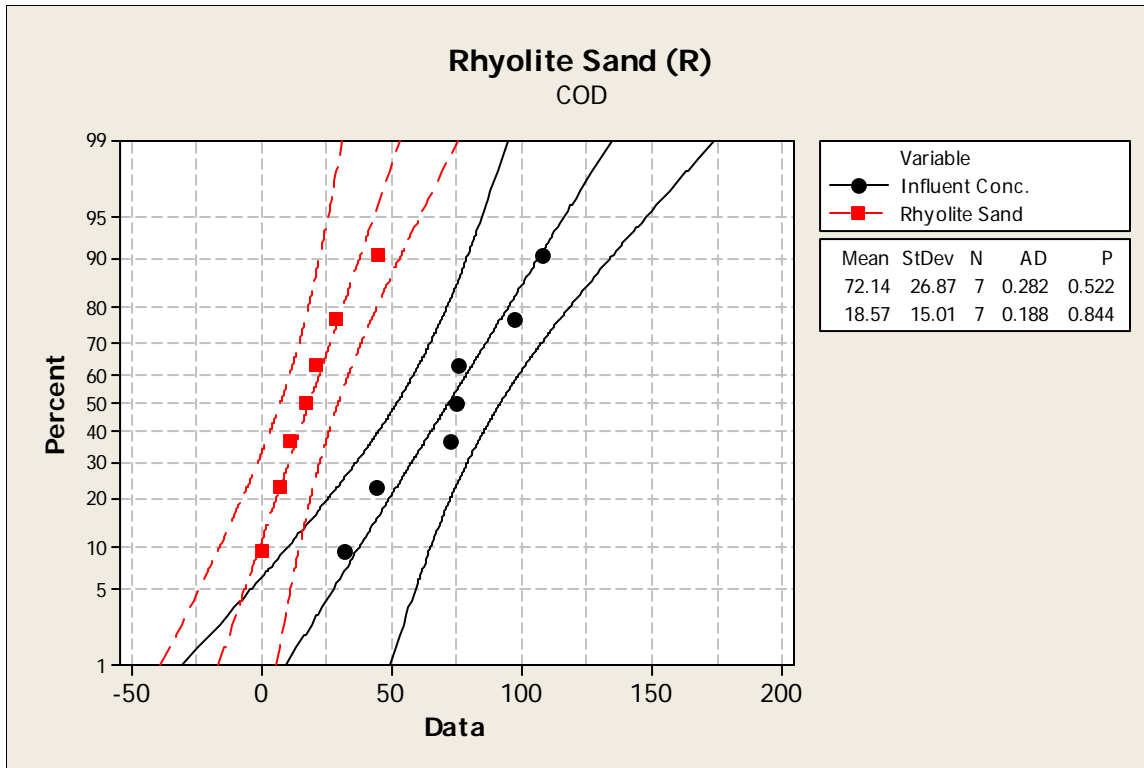


Figure A4-39. Probability plots for COD and Rhyolite sand column.

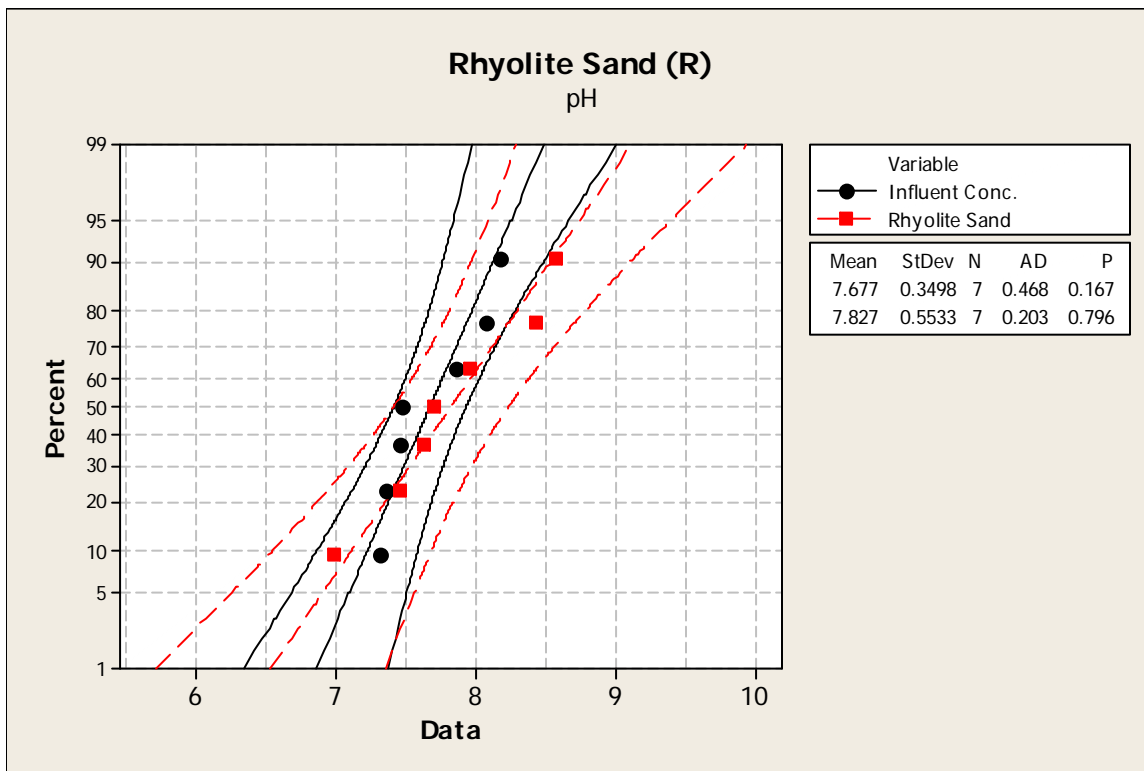


Figure A4-40. Probability plots for pH and Rhyolite sand column.

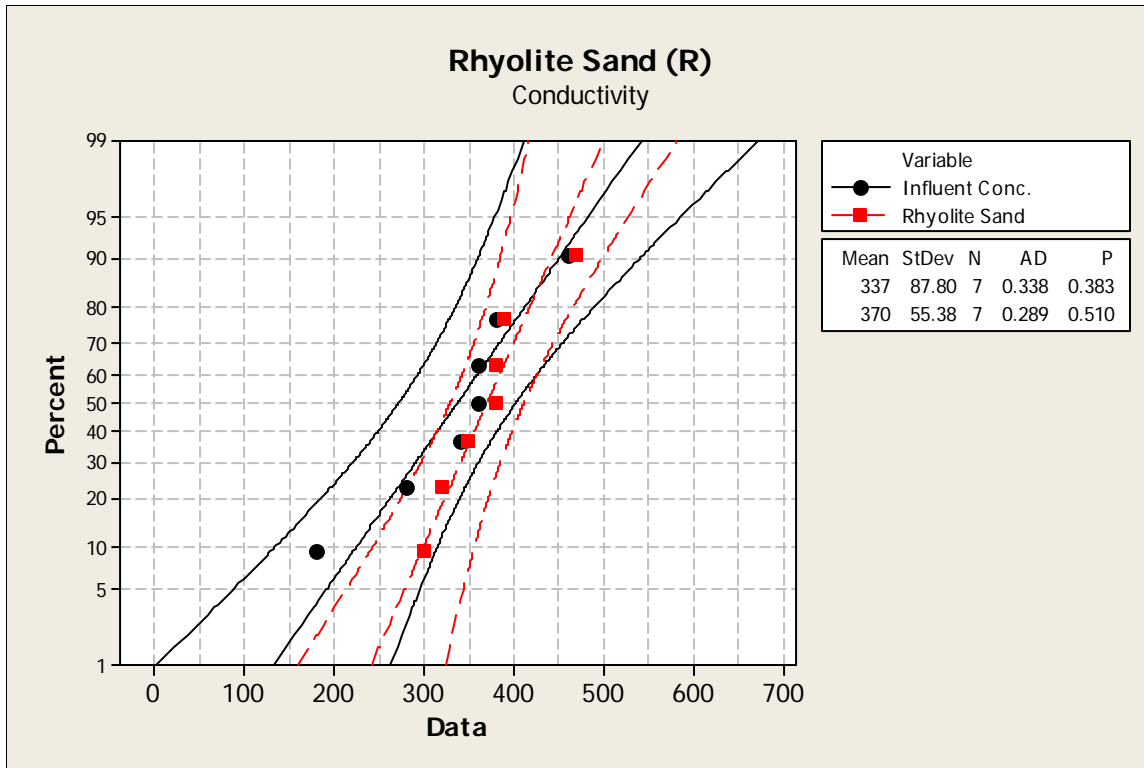


Figure A4-41. Probability plots for conductivity and Rhyolite sand column.

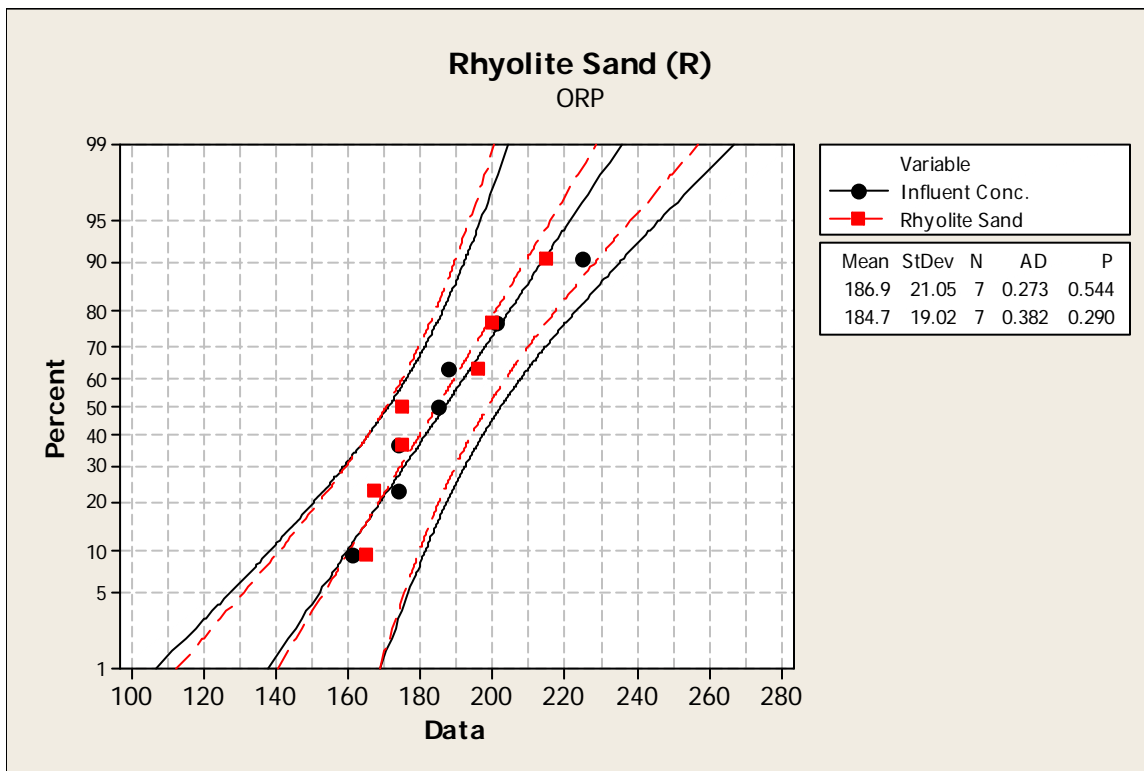


Figure A4-42. Probability plots for ORP and Rhyolite sand column.

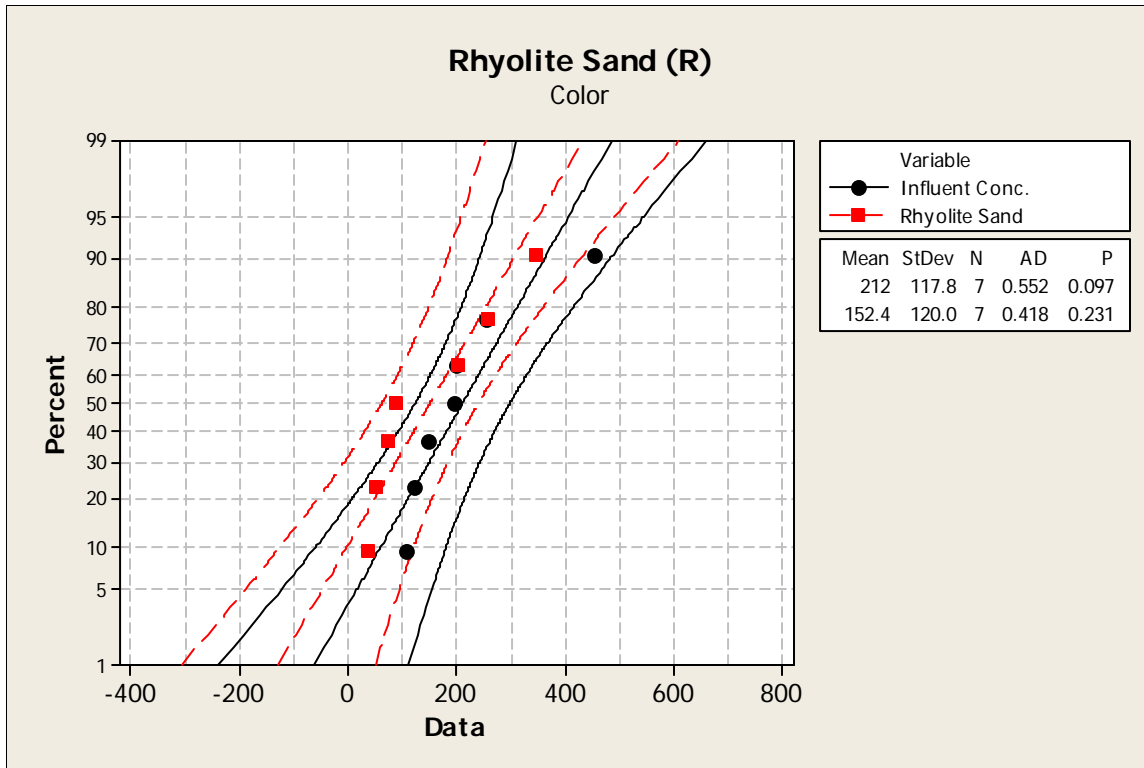


Figure A4-43. Probability plots for color and Rhyolite sand column.

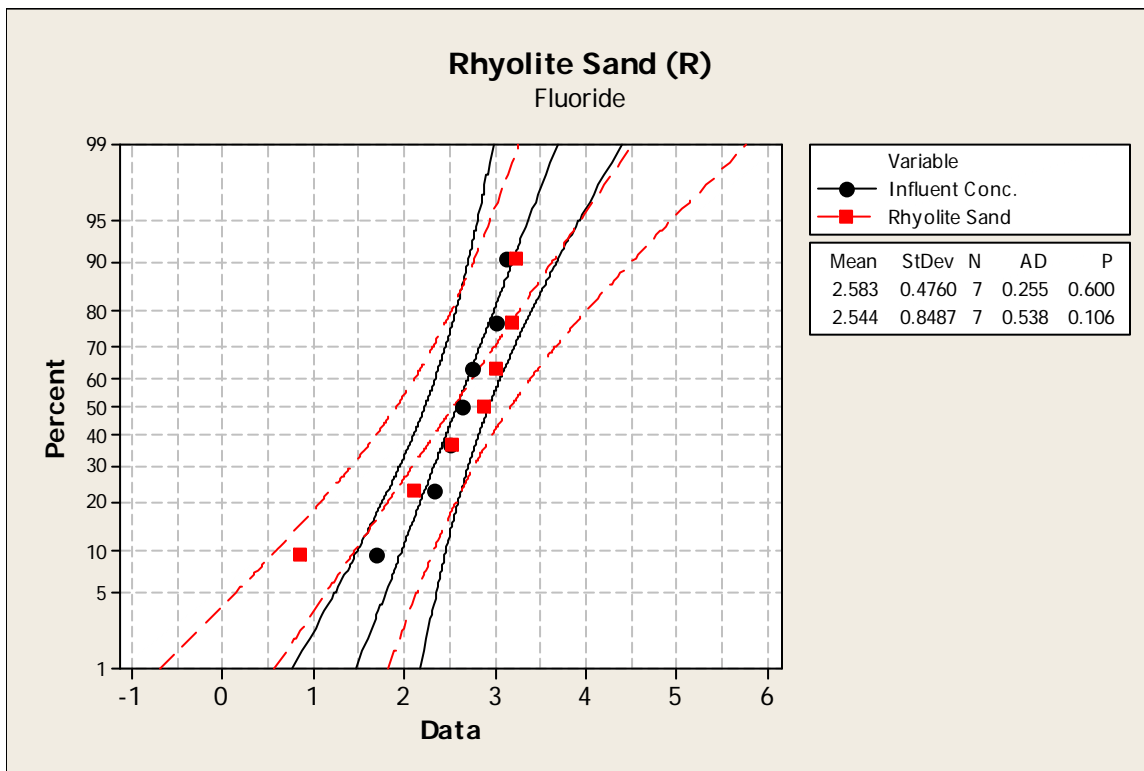


Figure A4-44. Probability plots for fluoride and Rhyolite sand column.

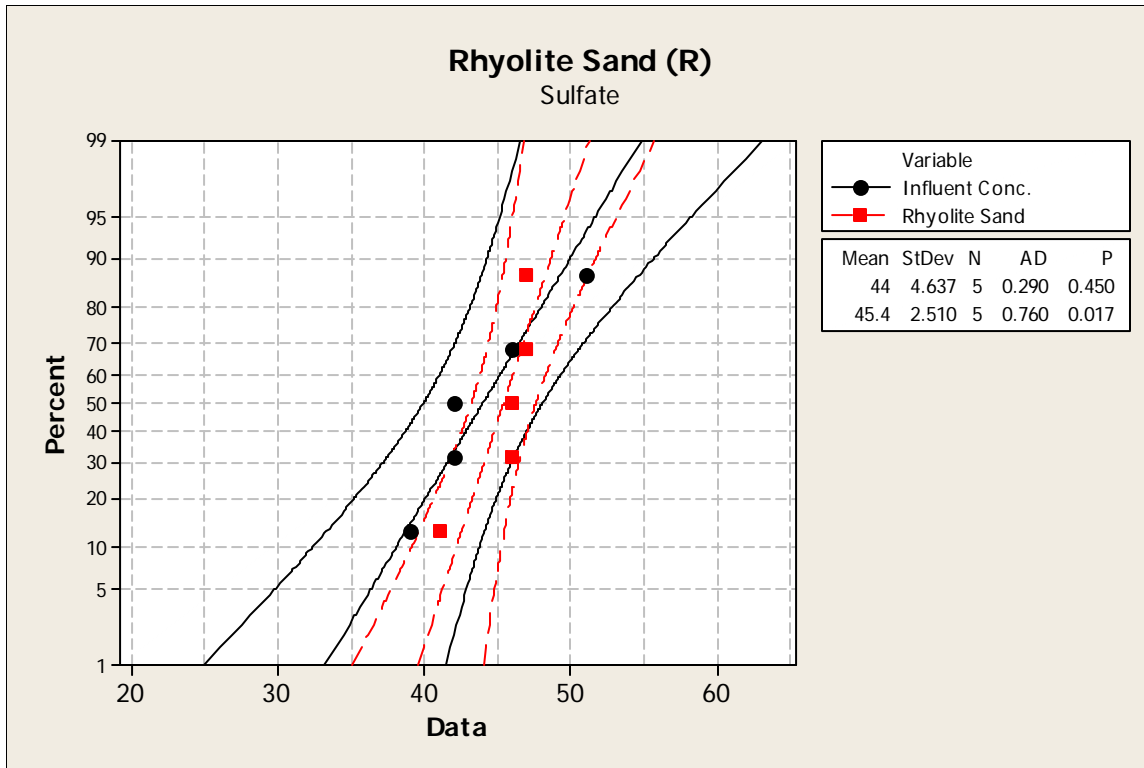


Figure A4-45. Probability plots for sulfate and Rhyolite sand column.

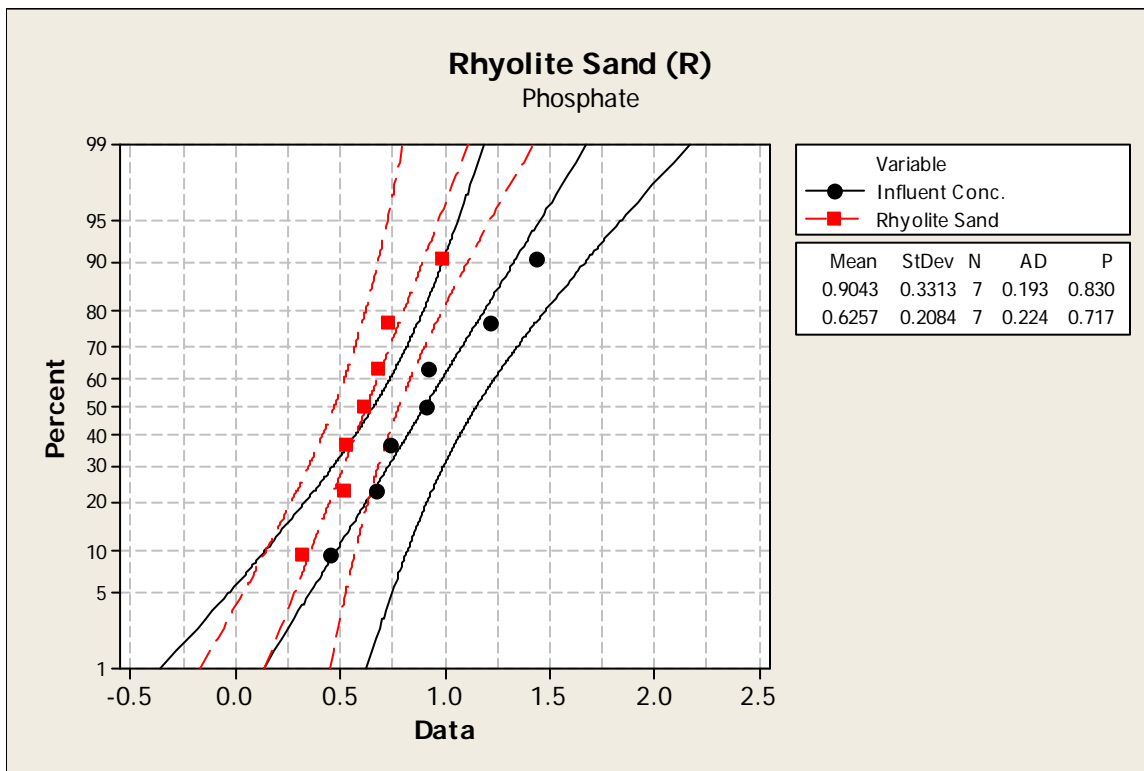


Figure A4-46. Probability plots for phosphate and Rhyolite sand column.

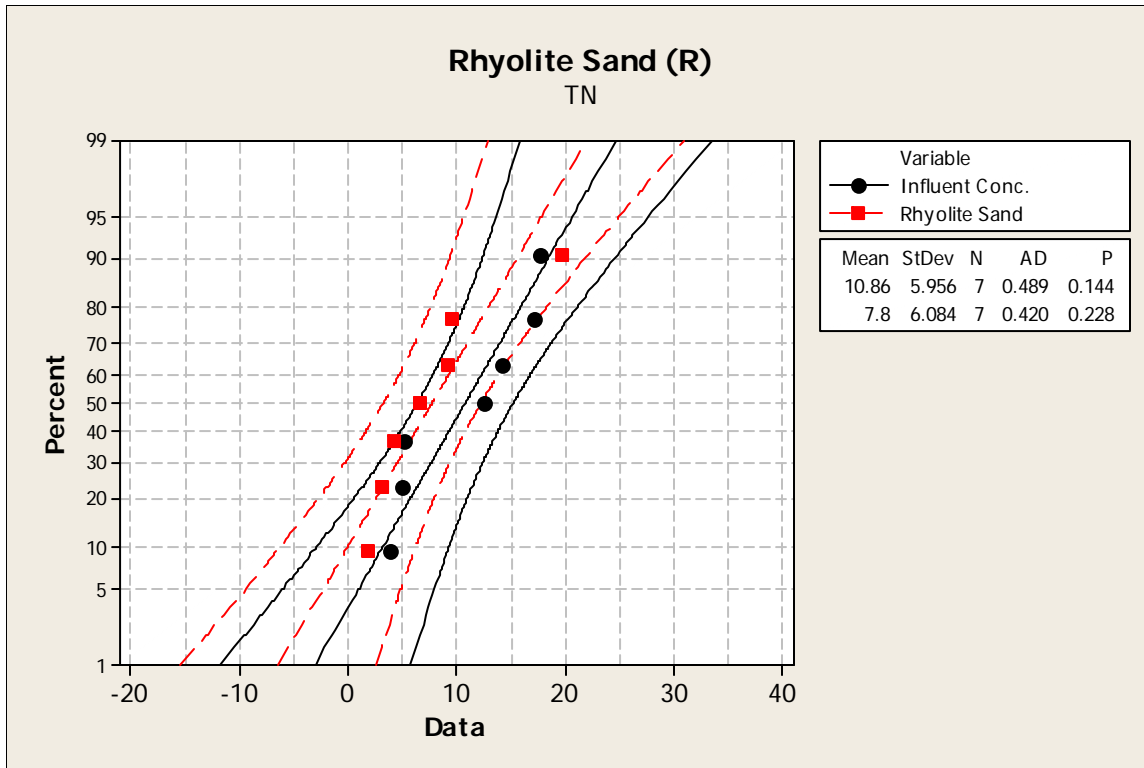


Figure A4-47. Probability plots for total nitrogen and Rhyolite sand column.

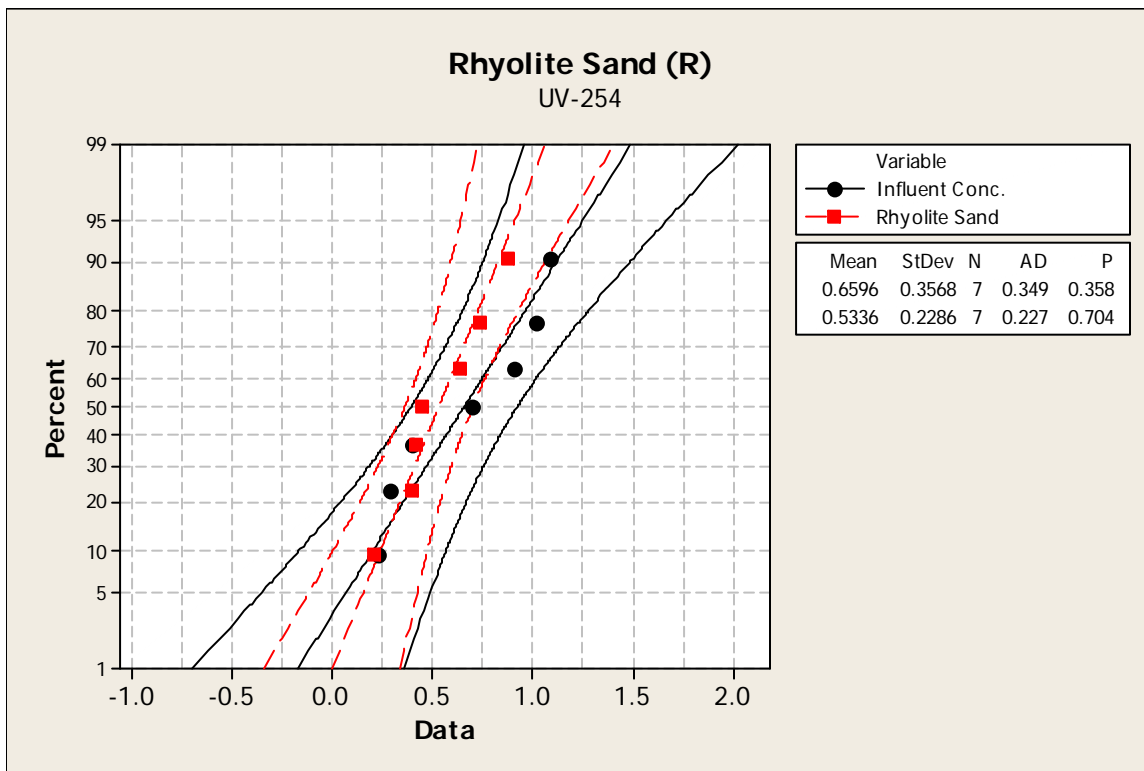


Figure A4-48. Probability plots for UV-254 and Rhyolite sand column.

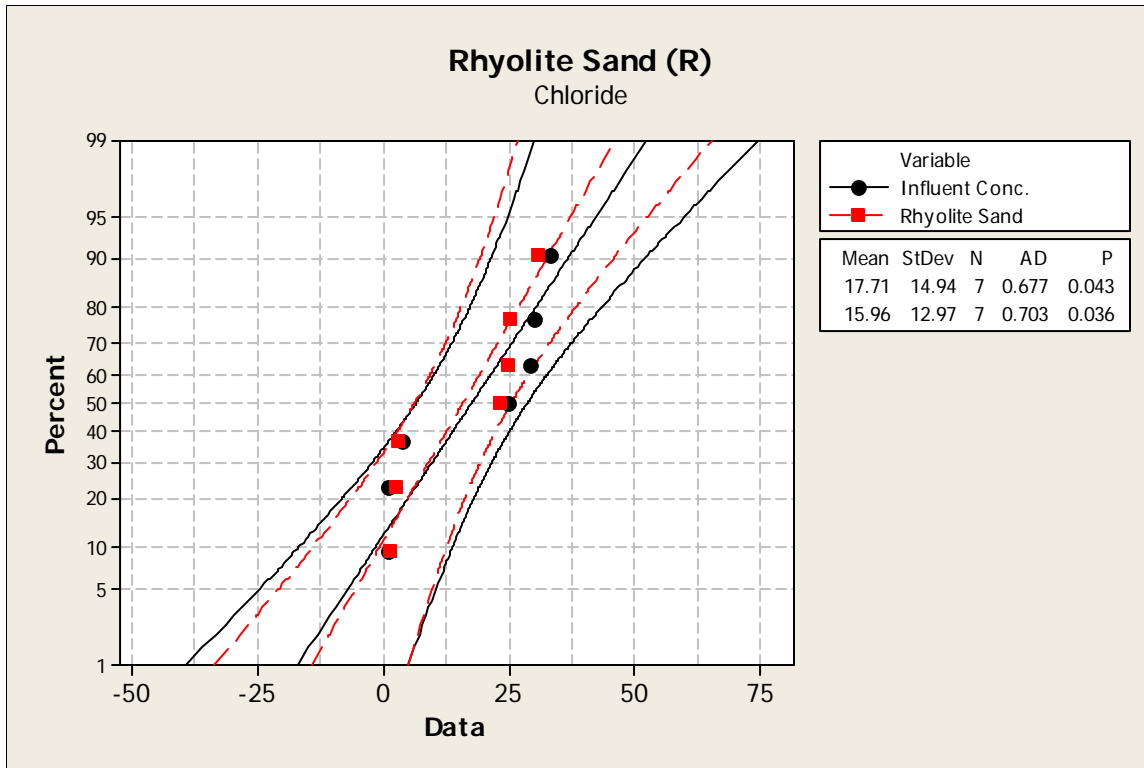


Figure A4-49. Probability plots for chloride and Rhyolite sand column.

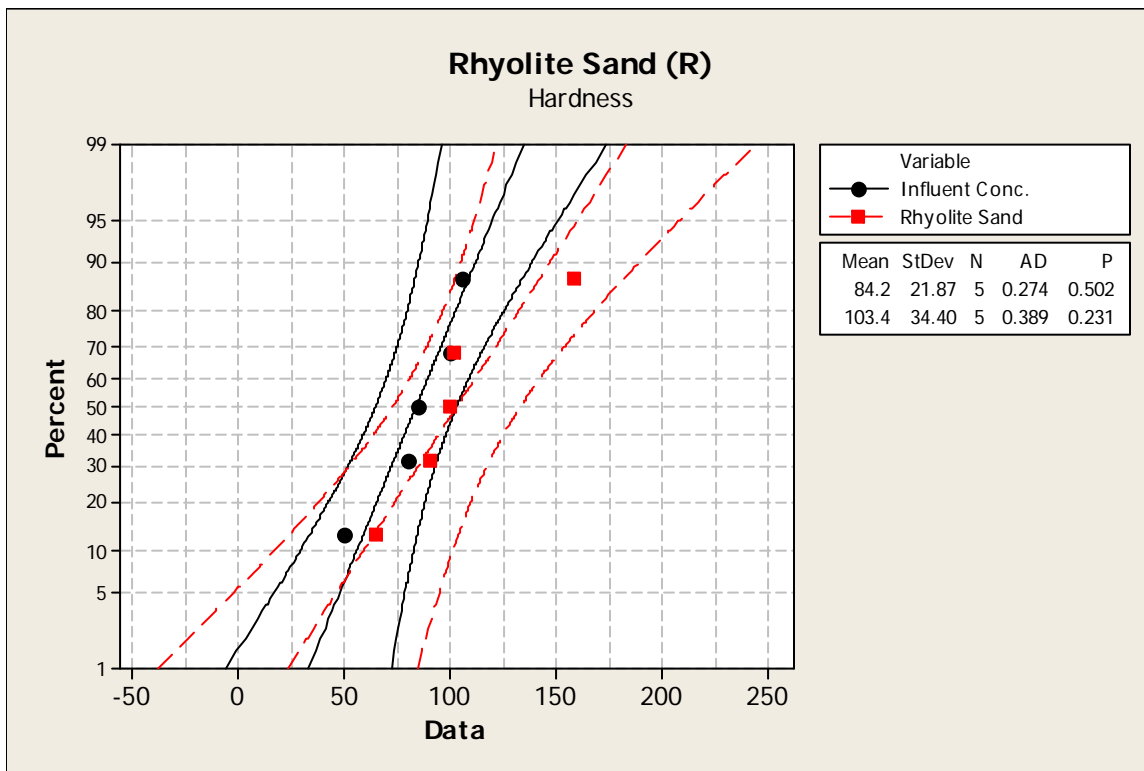


Figure A4-50. Probability plots for hardness and Rhyolite sand column.

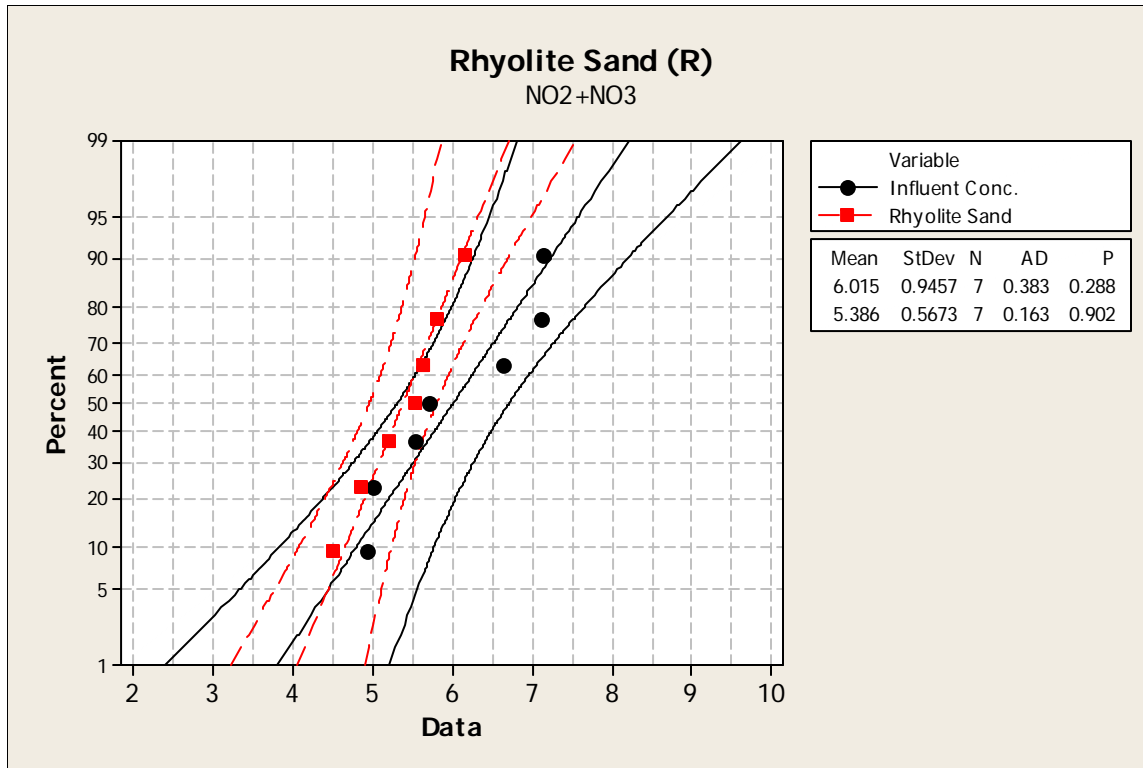


Figure A4-51. Probability plots for nitrite plus nitrate and Rhyolite sand column.

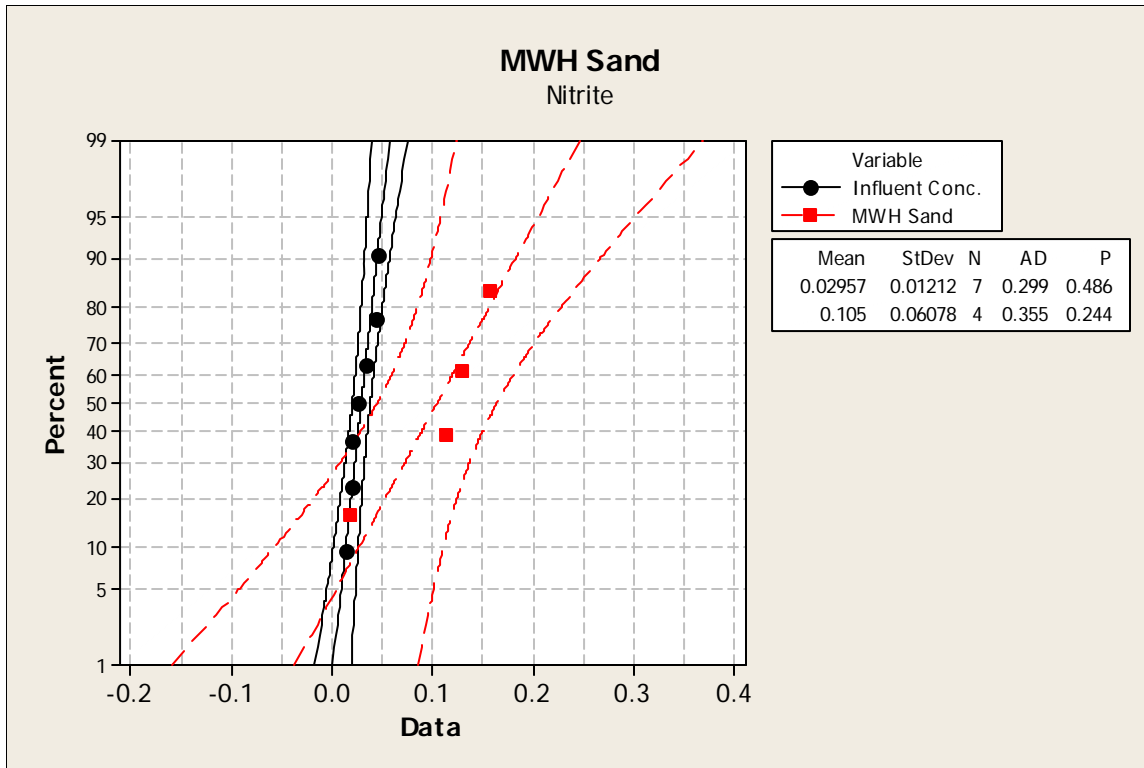


Figure A4-52. Probability plots for nitrite and site filter sand column.

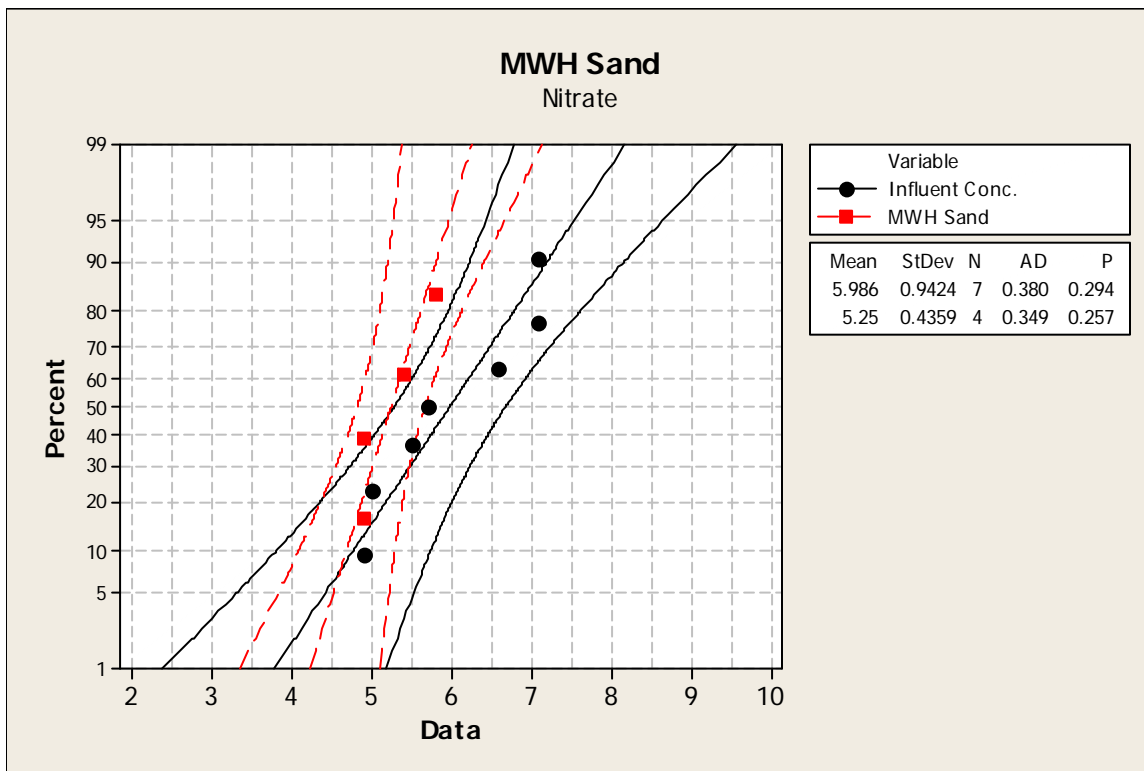


Figure A4-53. Probability plots for nitrate and site filter sand column.

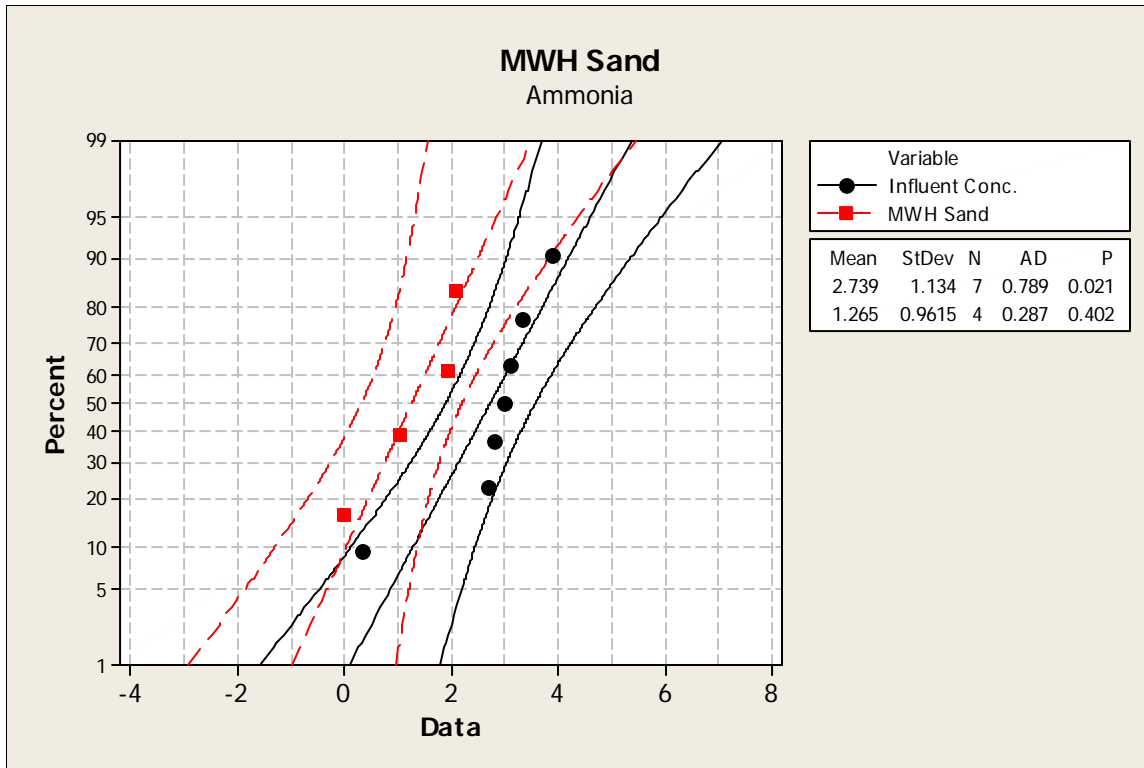


Figure A4-54. Probability plots for ammonia and site filter sand column.

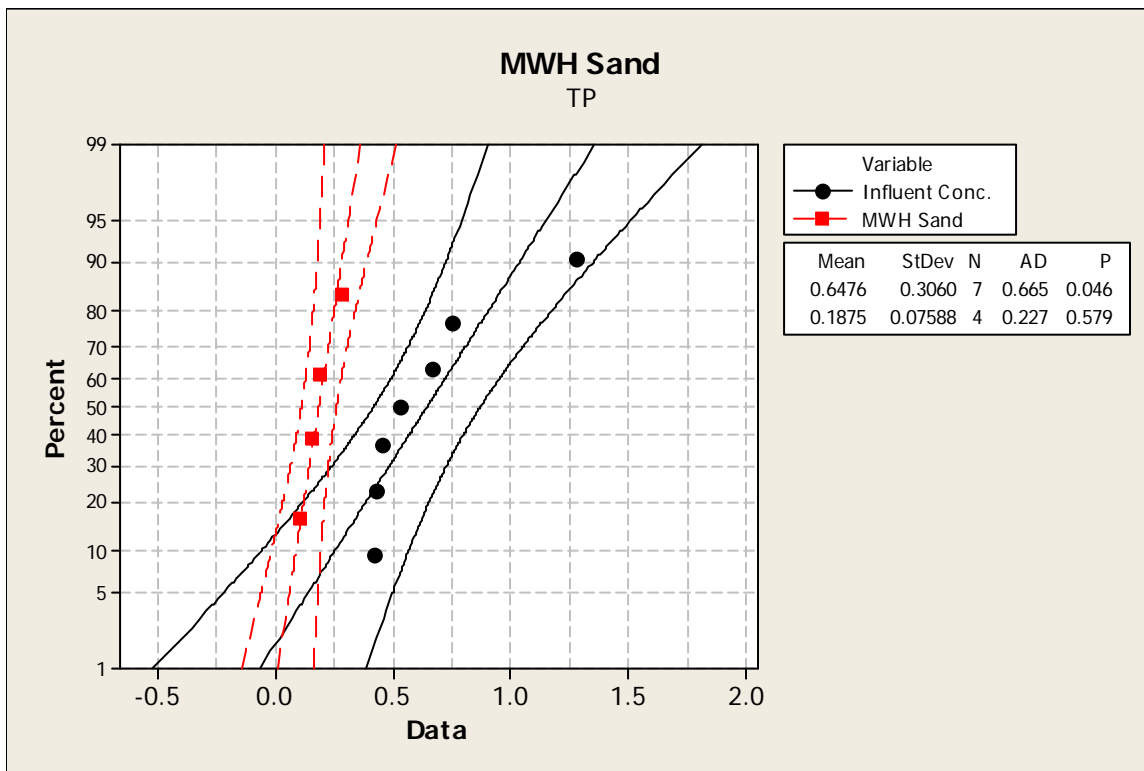


Figure A4-55. Probability plots for total phosphate and site filter sand column.

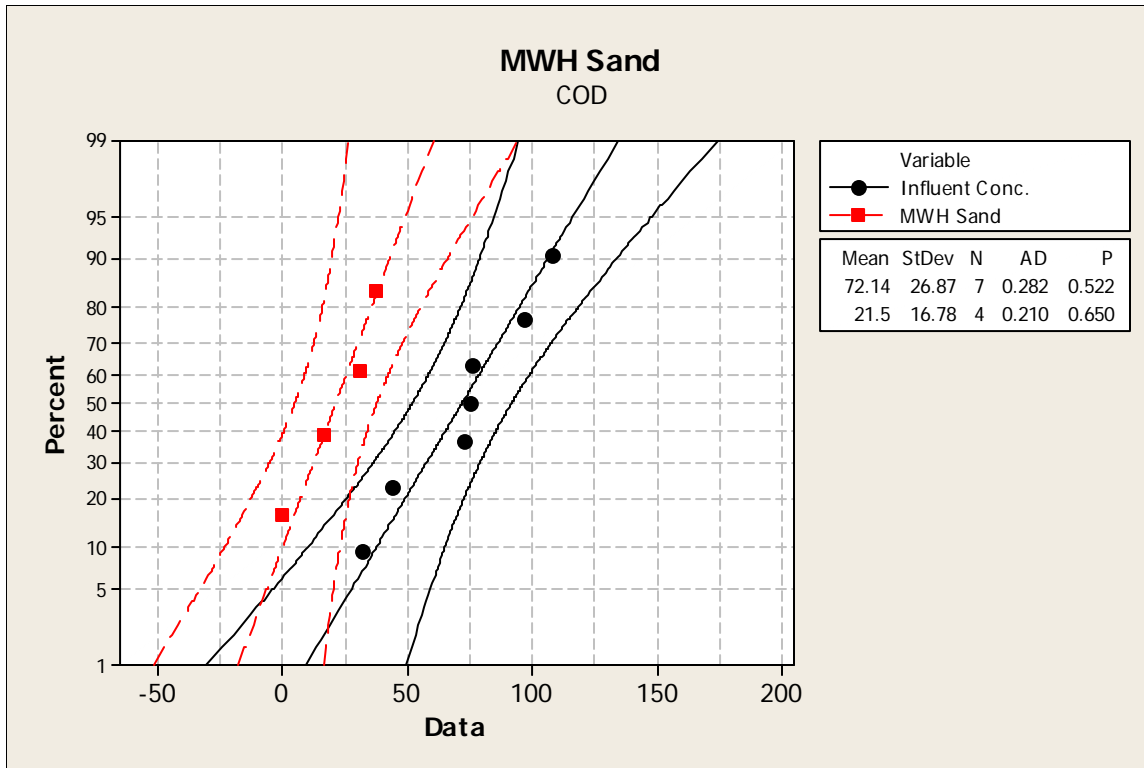


Figure A4-56. Probability plots for COD and site filter sand column.

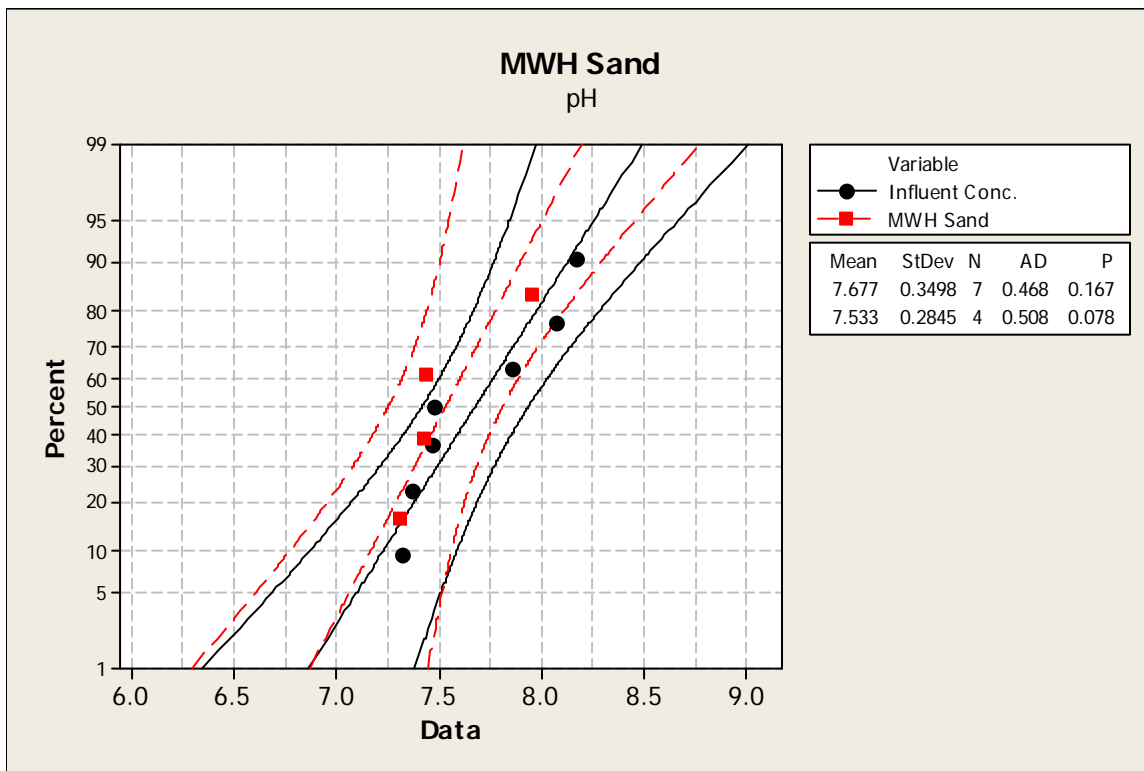


Figure A4-57. Probability plots for pH and site filter sand column.

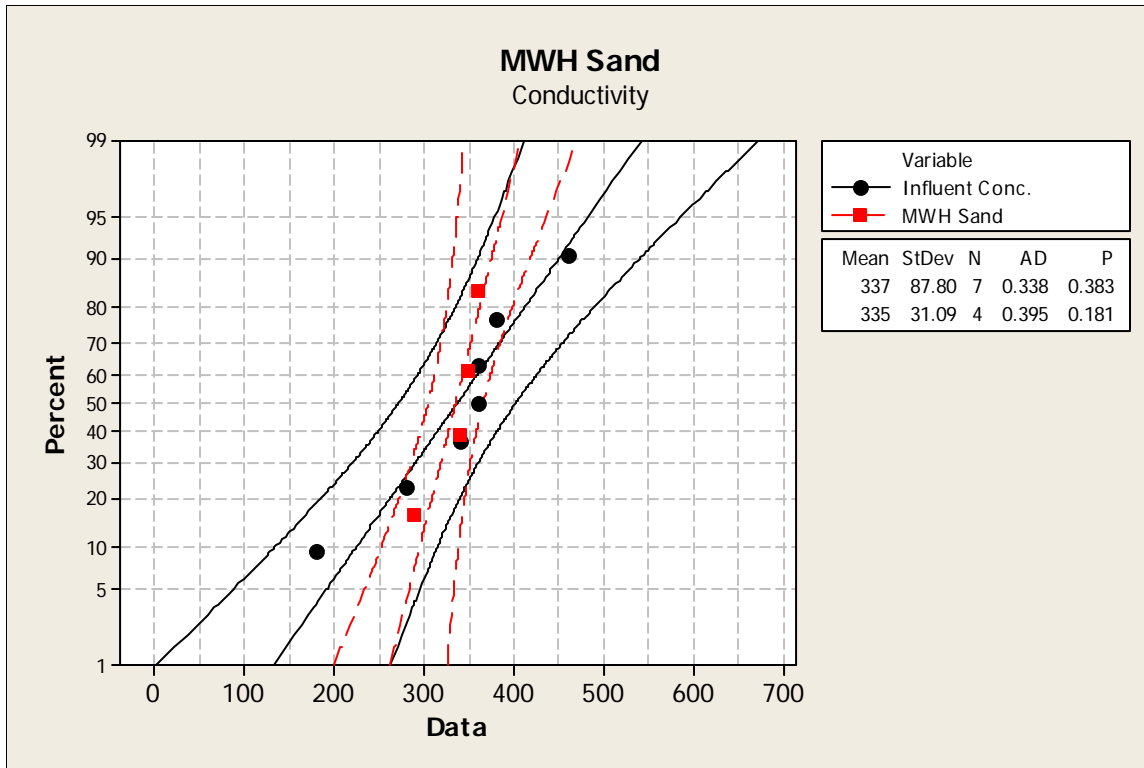


Figure A4-58. Probability plots for conductivity and site filter sand column.

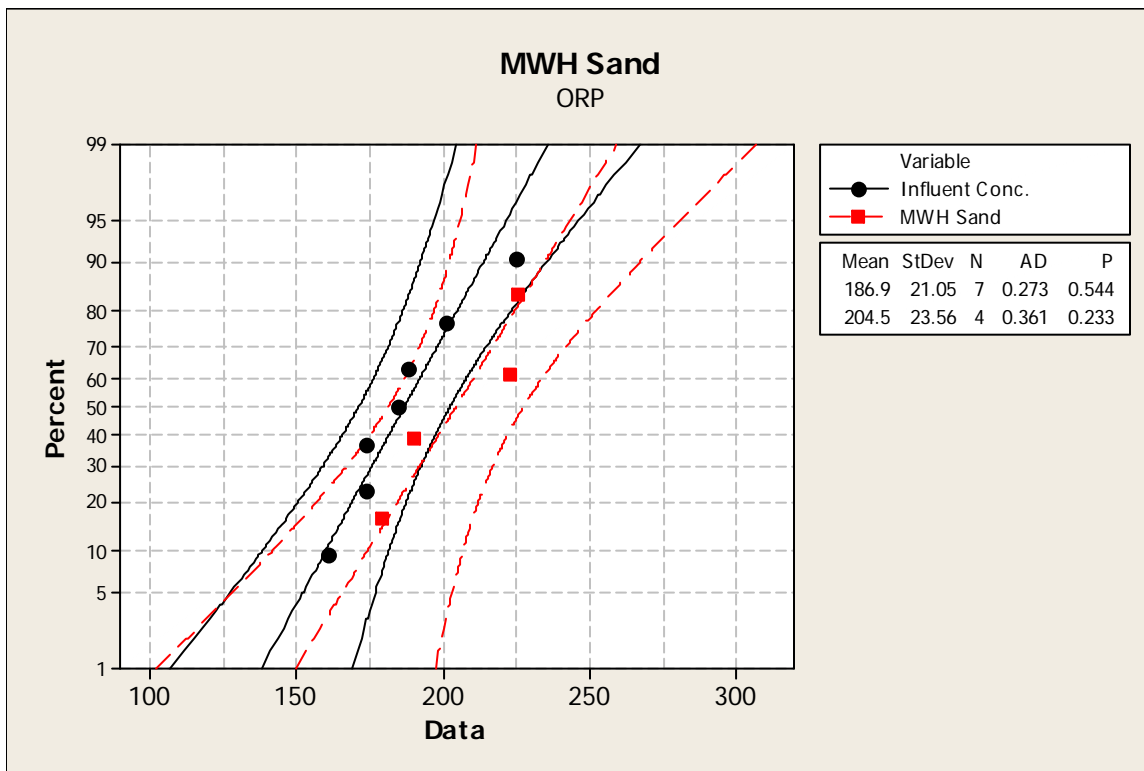


Figure A4-59. Probability plots for ORP and site filter sand column.

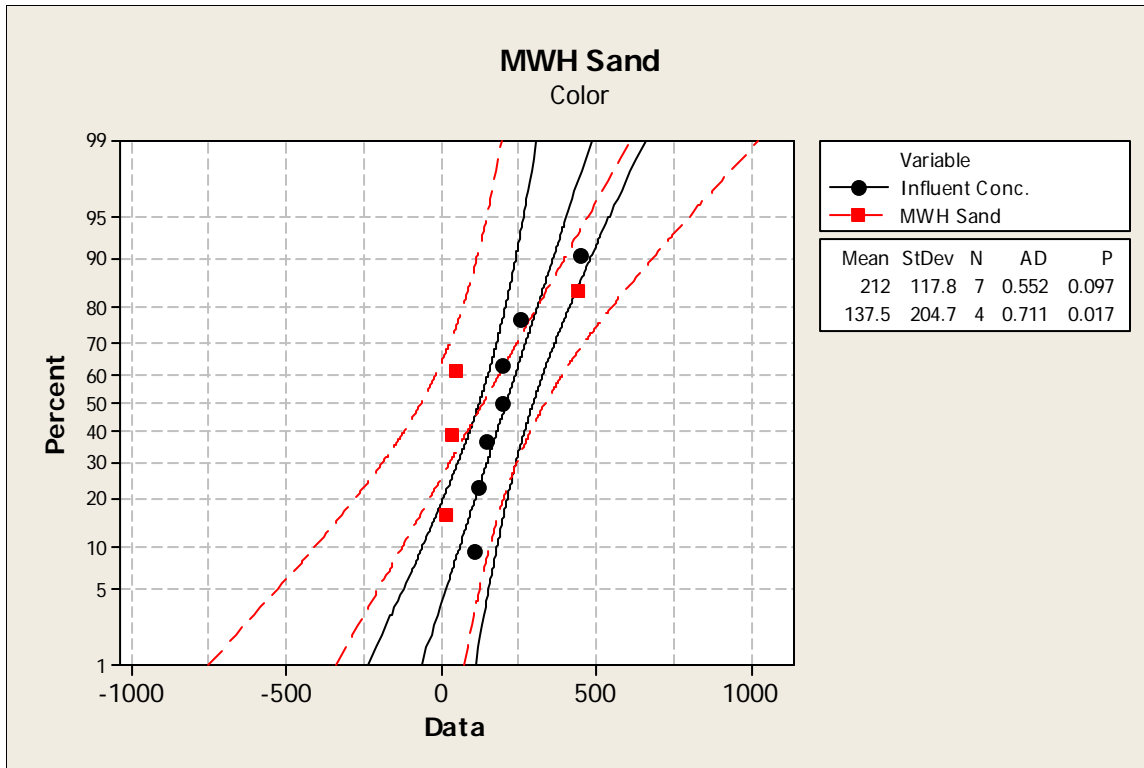


Figure A4-60. Probability plots for color and site filter sand column.

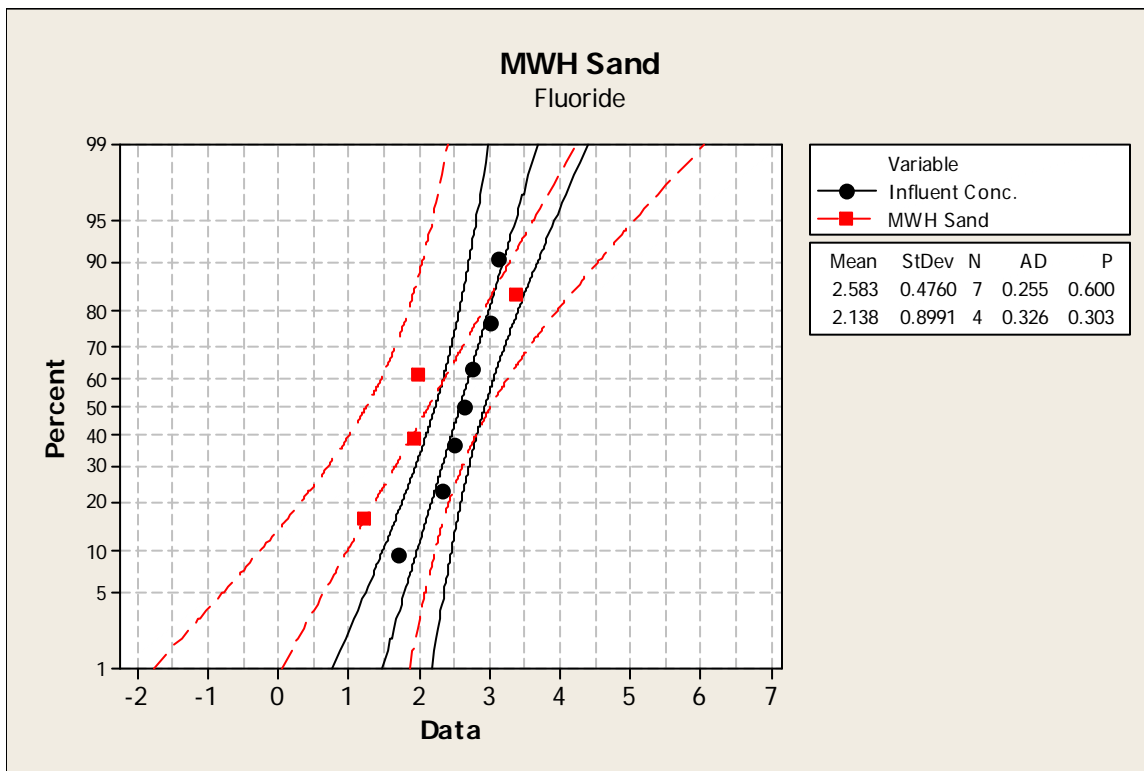


Figure A4-61. Probability plots for fluoride and site filter sand column.

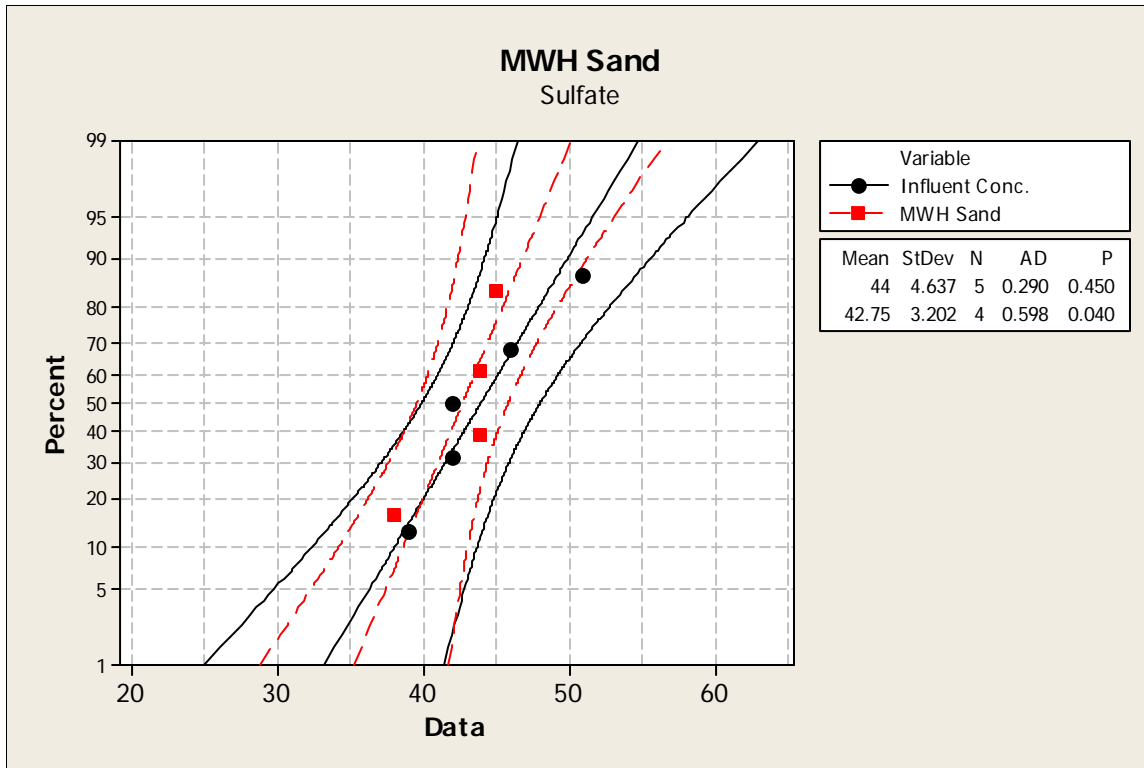


Figure A4-62. Probability plots for sulfate and site filter sand column.

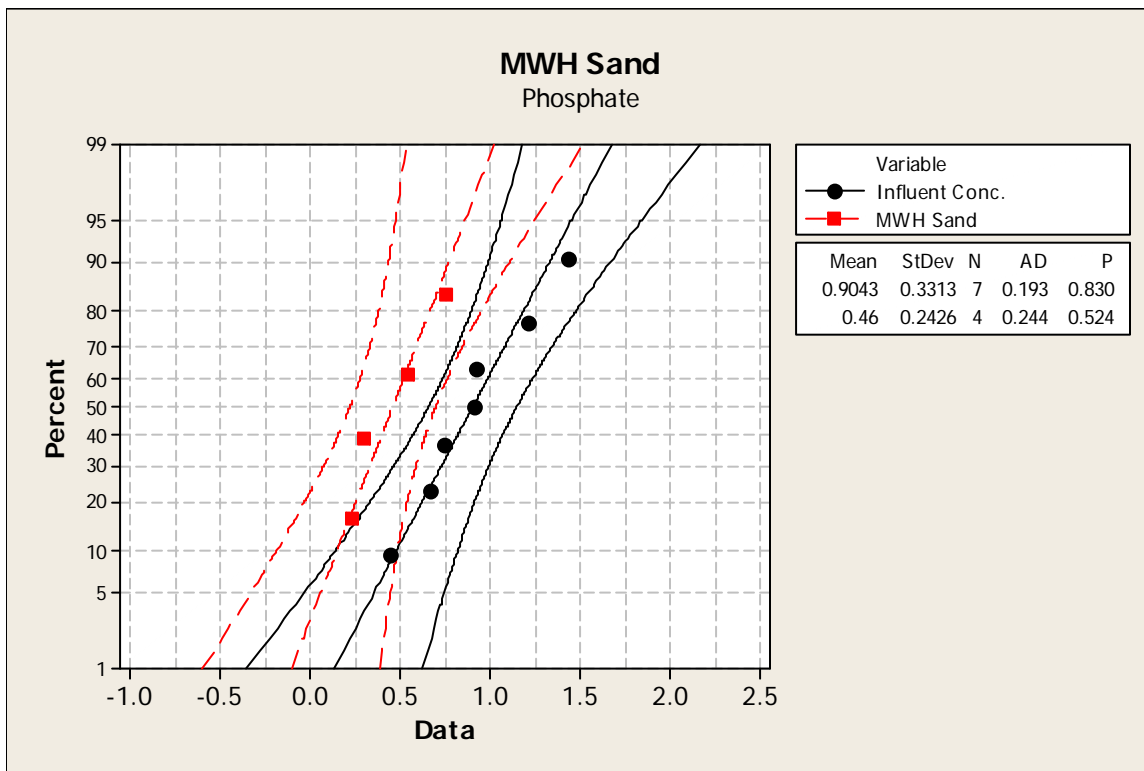


Figure A4-63. Probability plots for phosphate and site filter sand column.

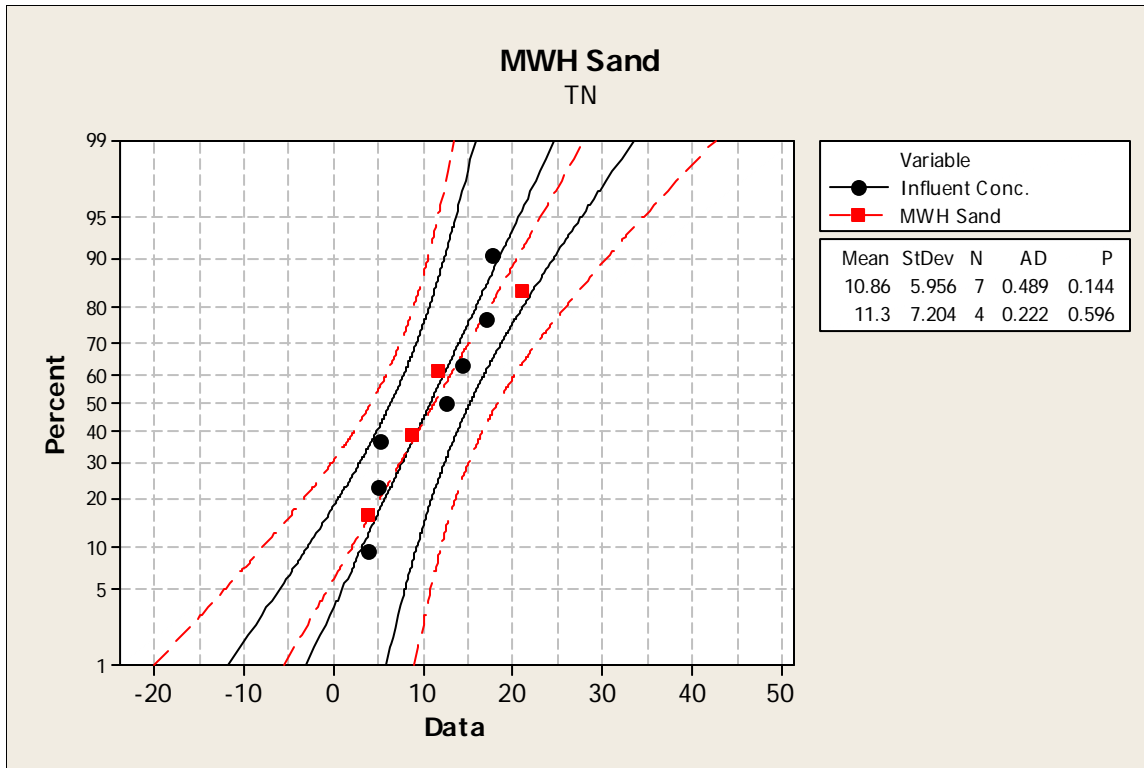


Figure A4-64. Probability plots for total nitrogen and site filter sand column.

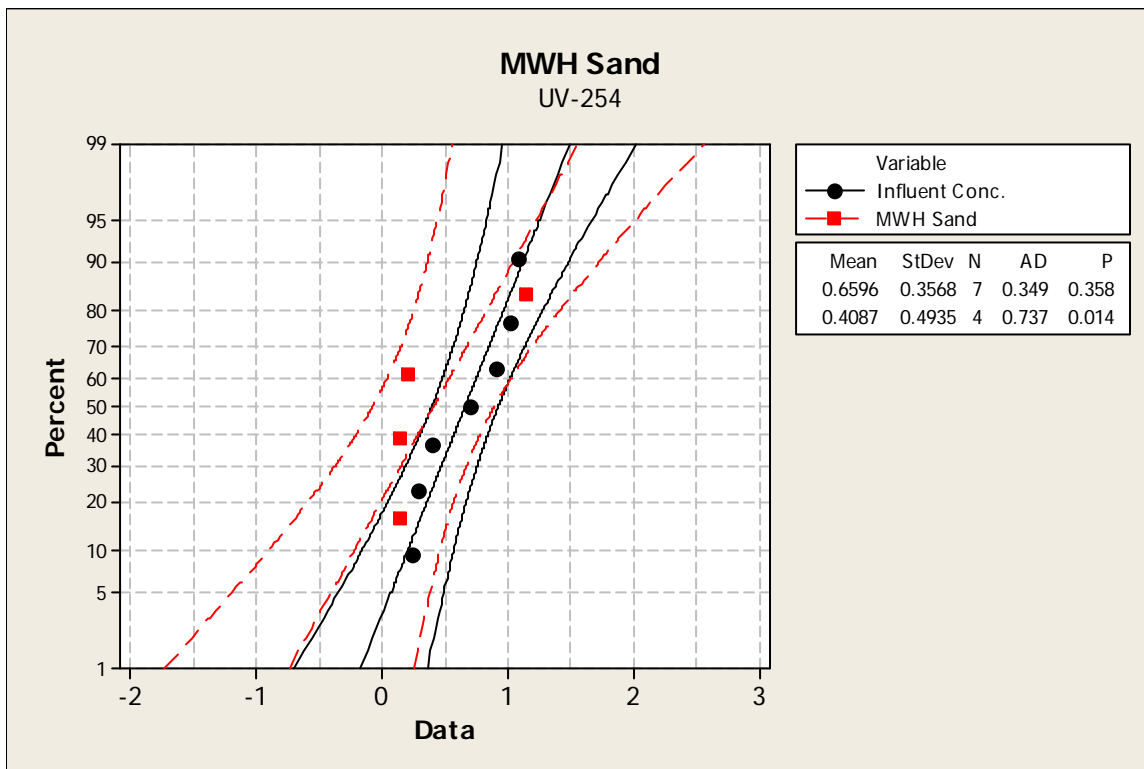


Figure A4-65. Probability plots for UV-254 and site filter sand column.

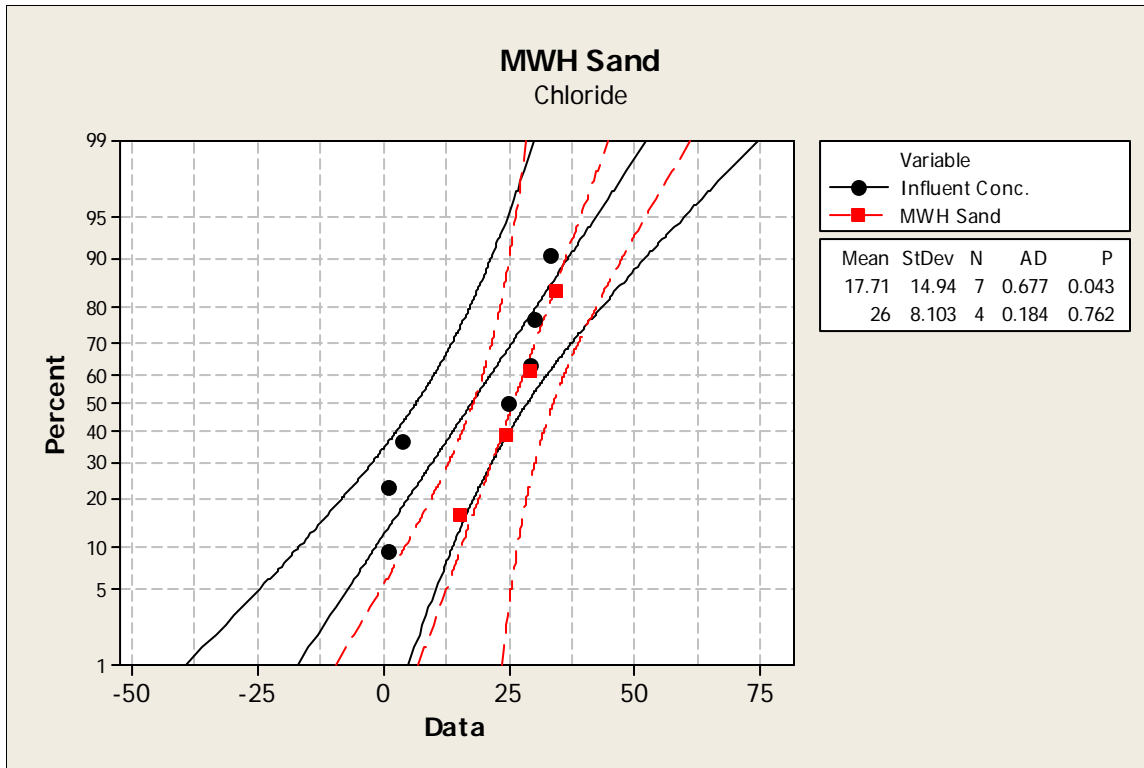


Figure A4-66. Probability plots for chloride and site filter sand column.

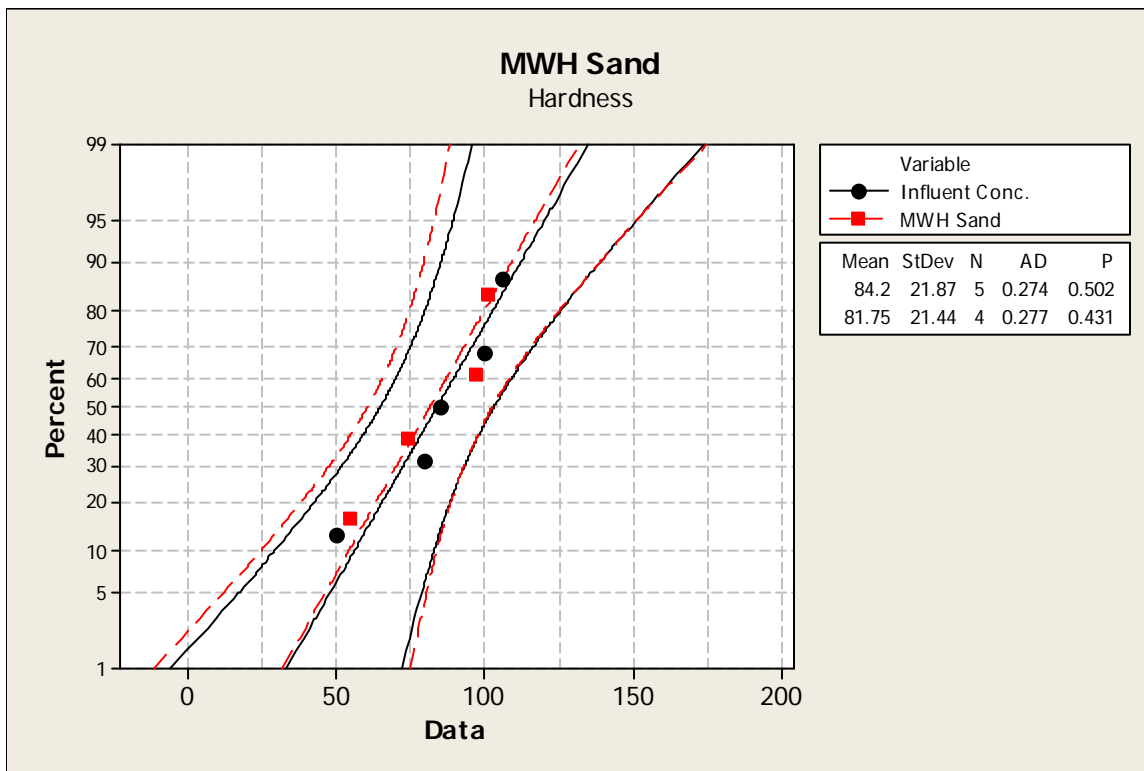


Figure A4-67. Probability plots for hardness and site filter sand column.

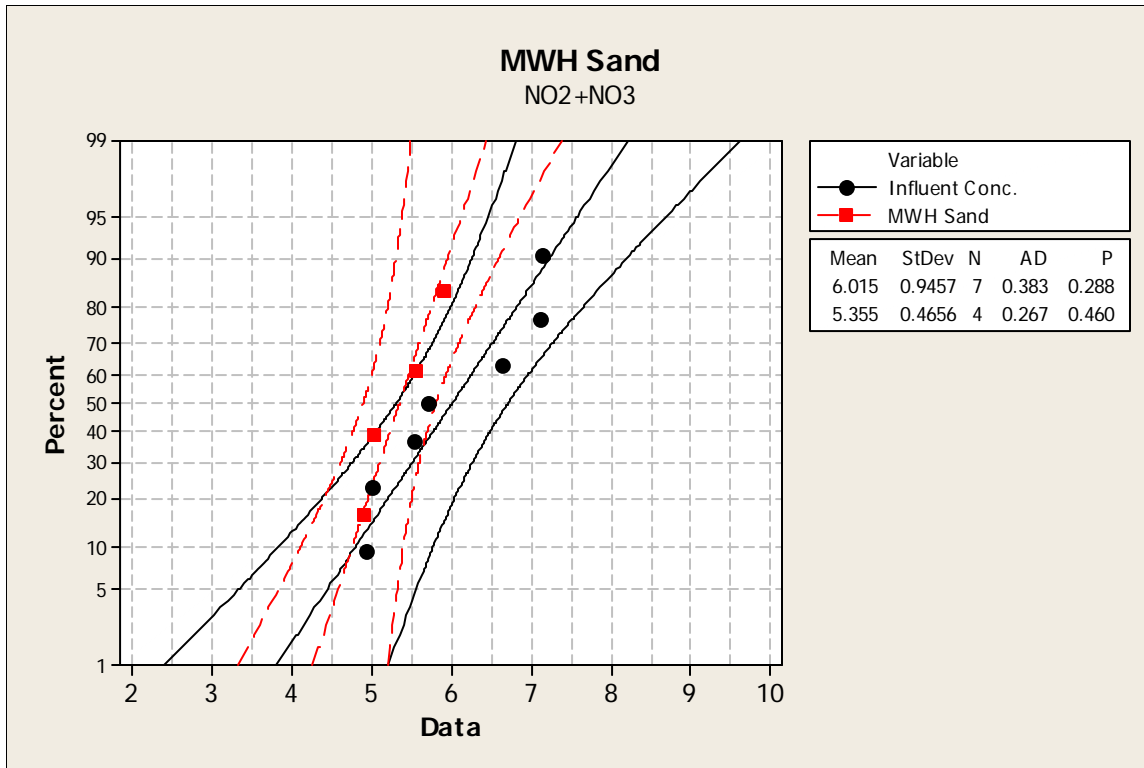


Figure A4-68. Probability plots for nitrite plus nitrate and site filter sand column.

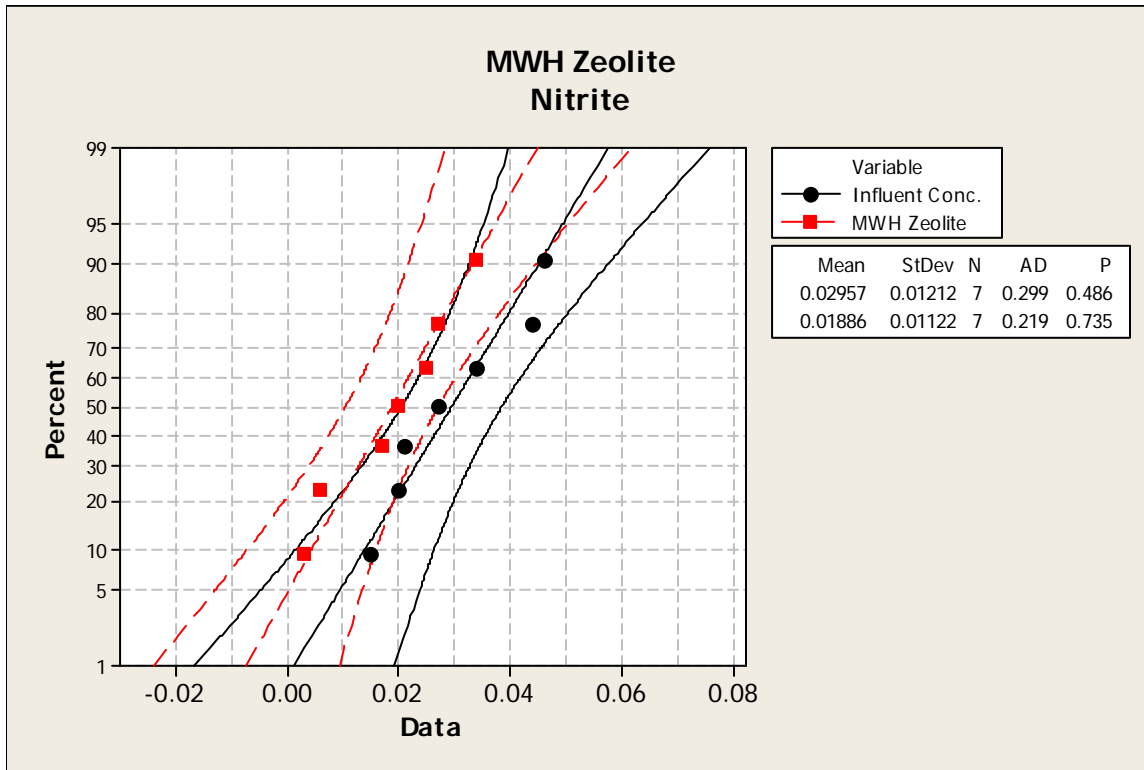


Figure A4-69. Probability plots for nitrite and site zeolite column.

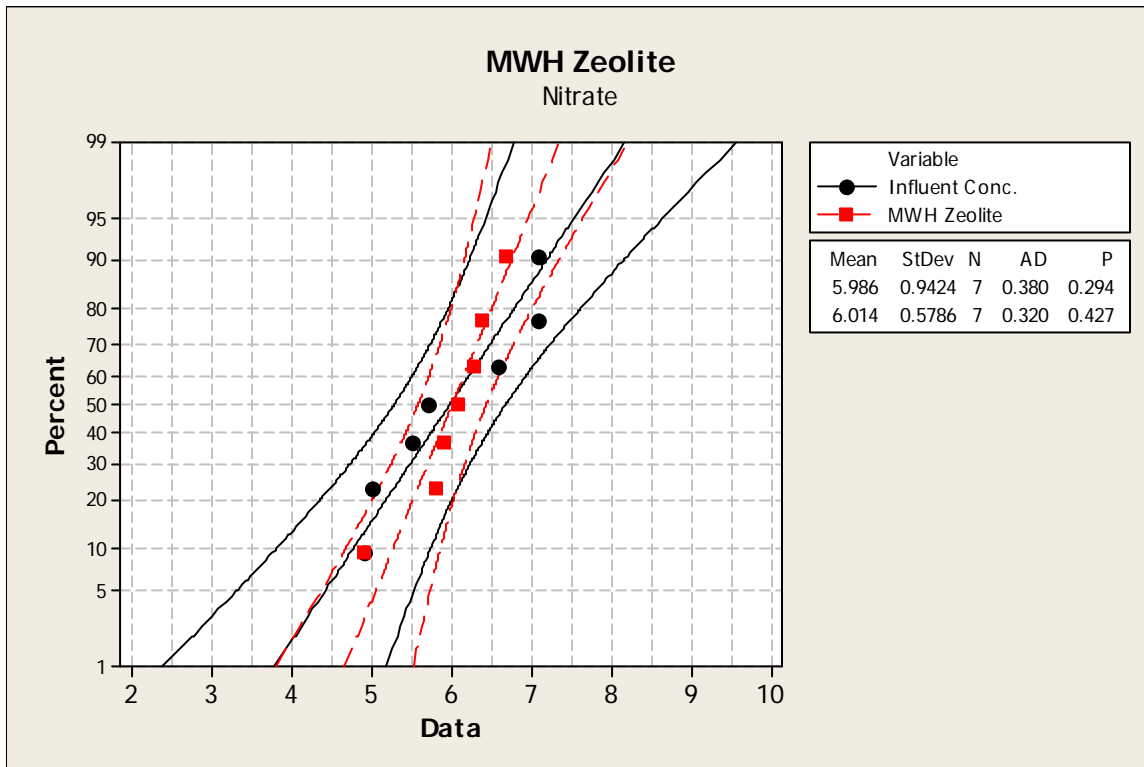


Figure A4-70. Probability plots for nitrate and site zeolite column.

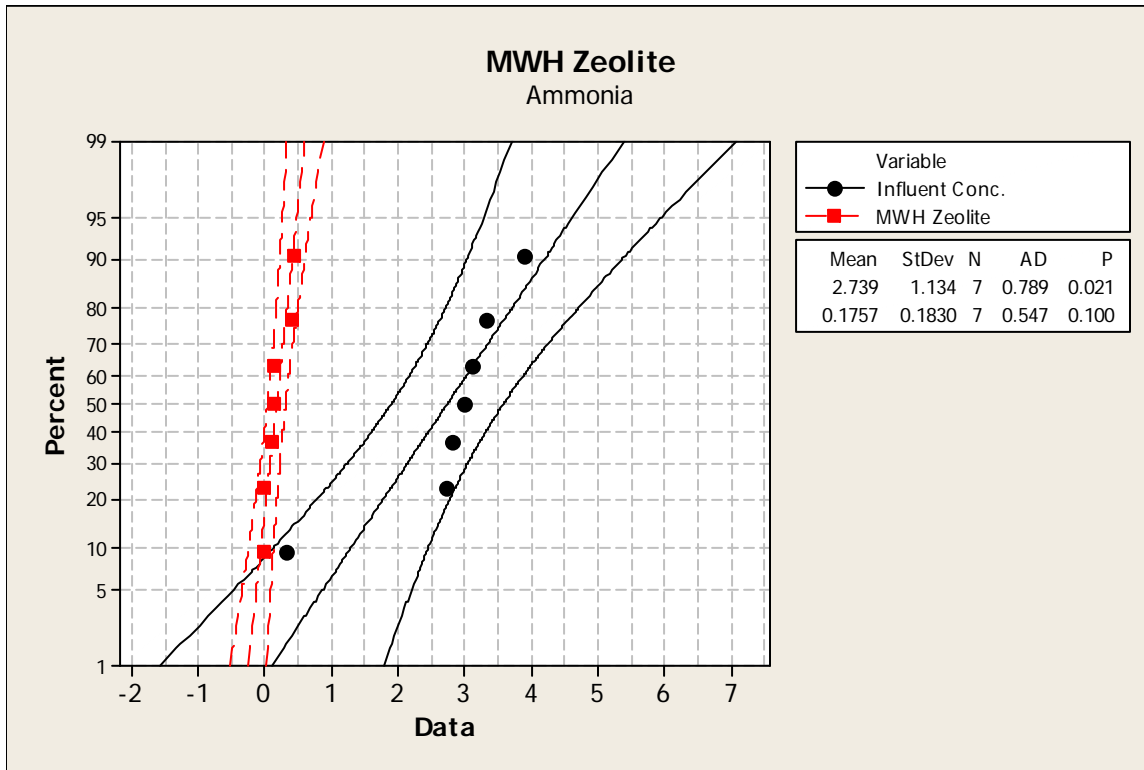


Figure A4-71. Probability plots for ammonia and site zeolite column.

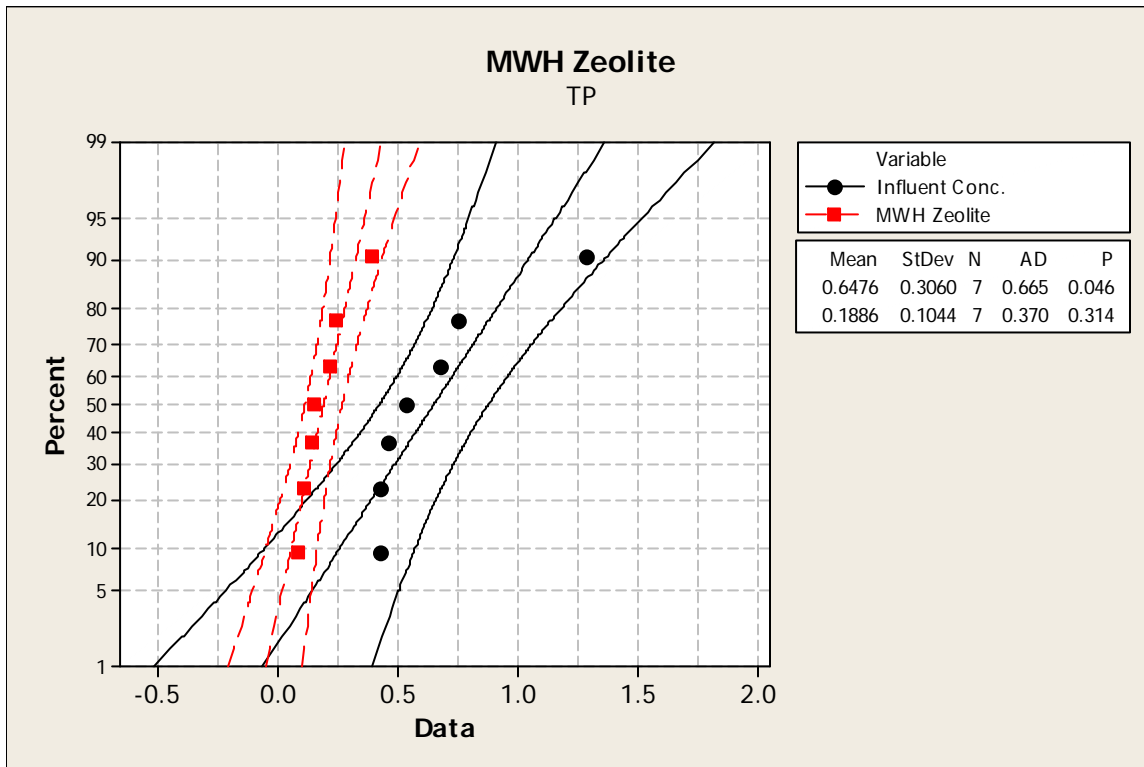


Figure A4-72. Probability plots for total phosphorus and site zeolite column.

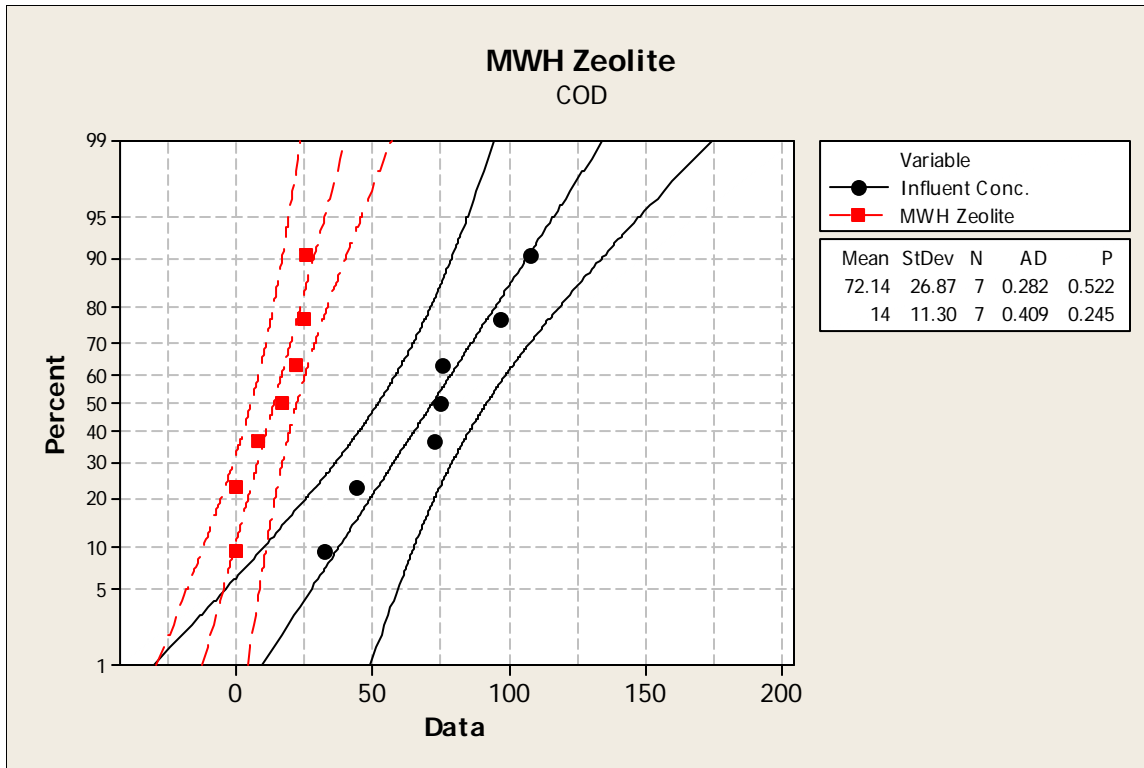


Figure A4-73. Probability plots for COD and site zeolite column.

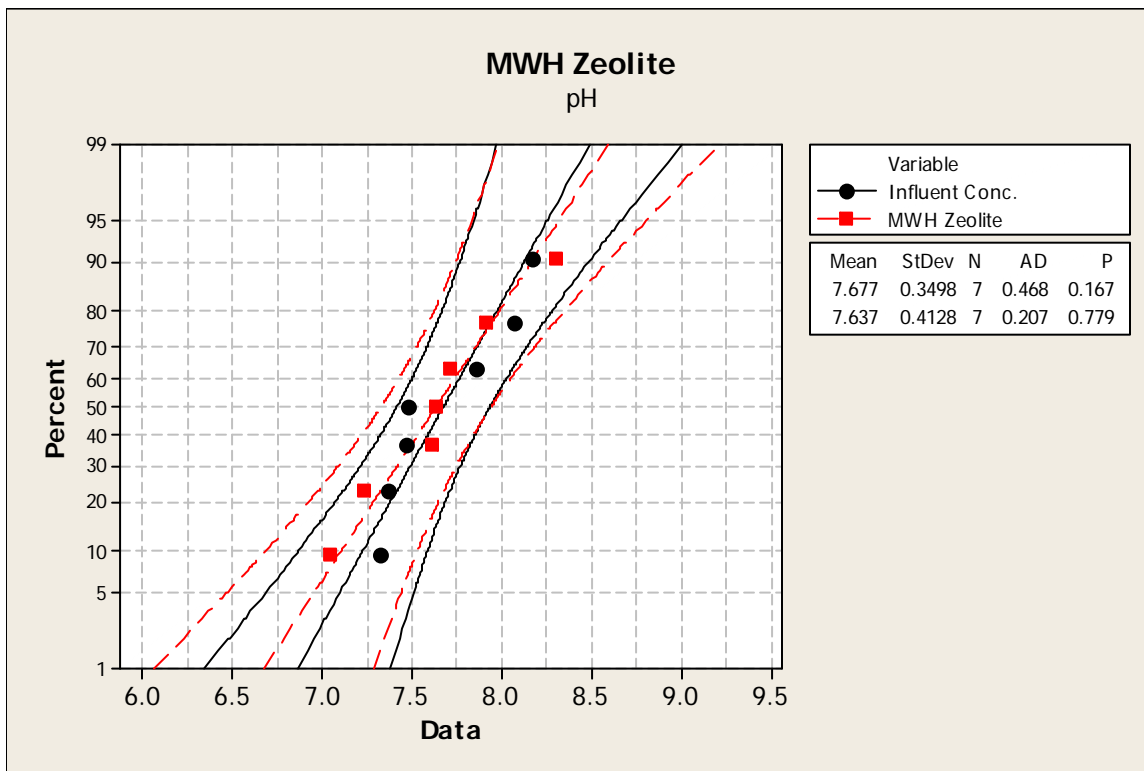


Figure A4-74. Probability plots for pH and site zeolite column.

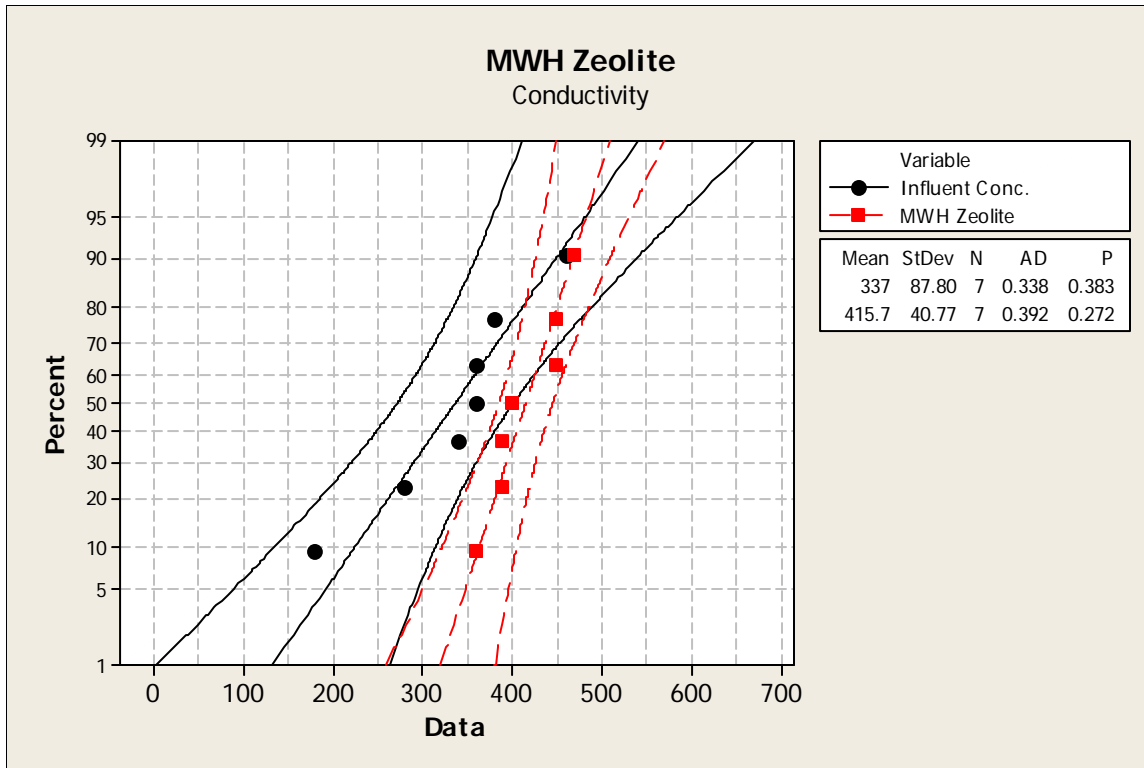


Figure A4-75. Probability plots for conductivity and site zeolite column.

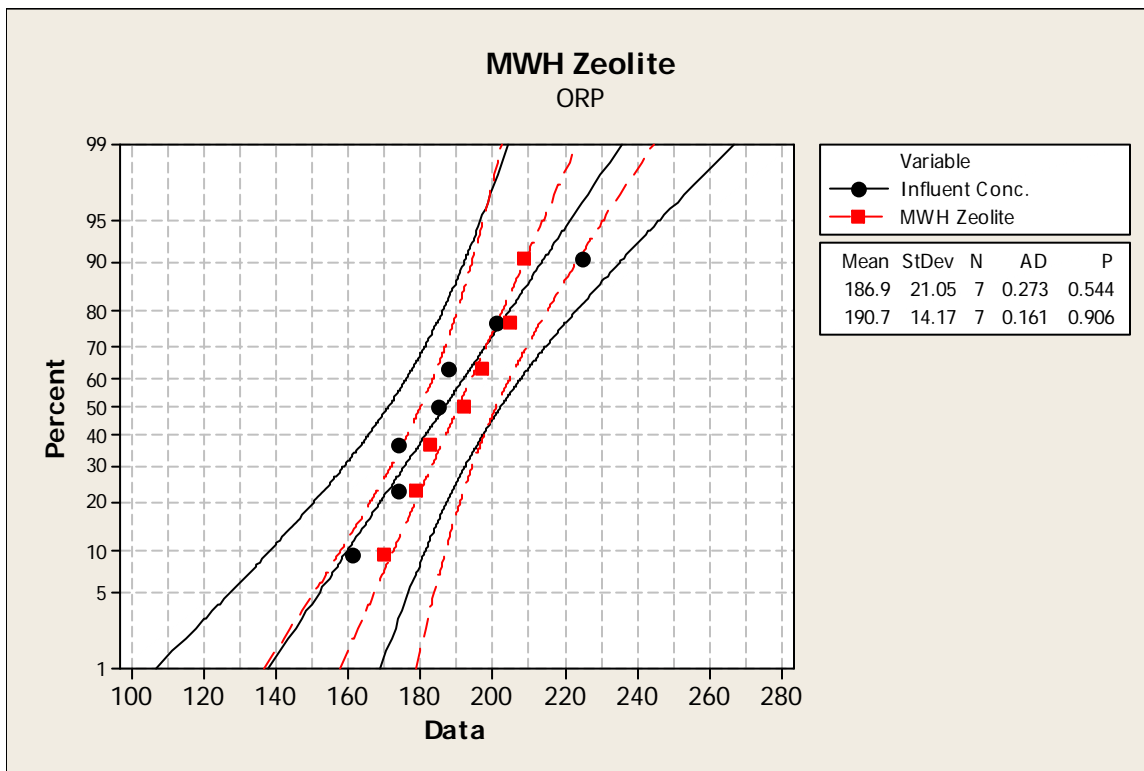


Figure A4-76. Probability plots for ORP and site zeolite column.

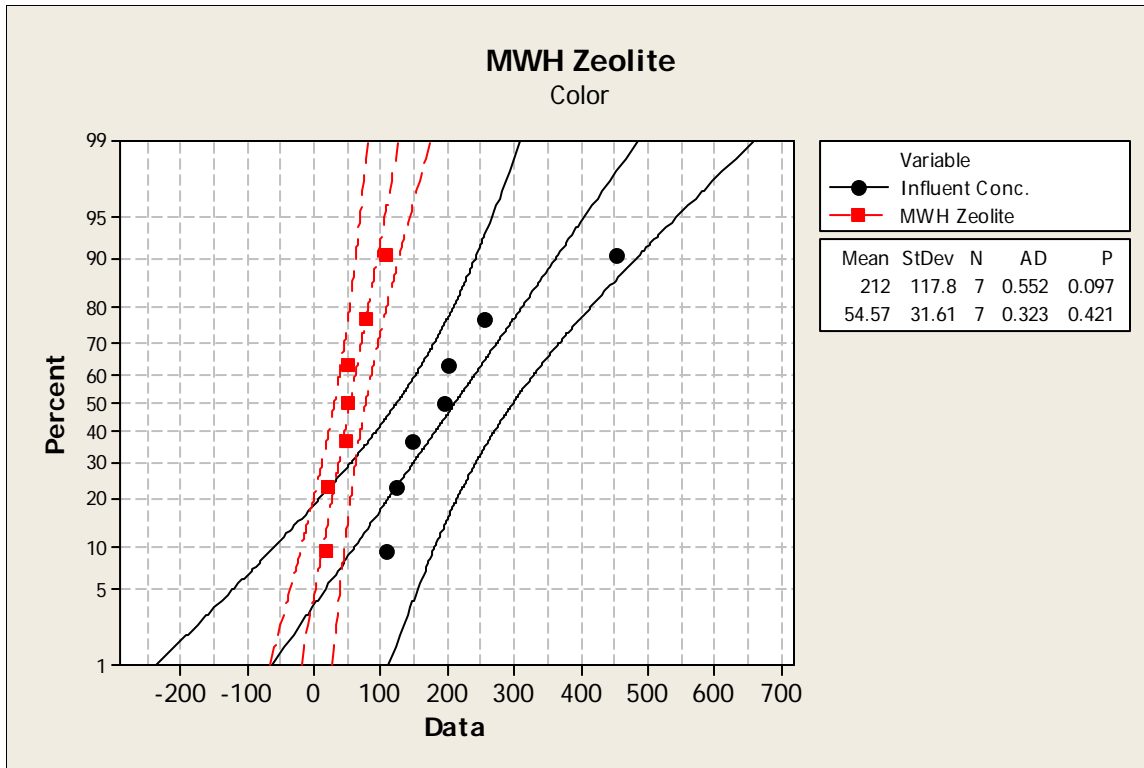


Figure A4-77. Probability plots for color and site zeolite column.

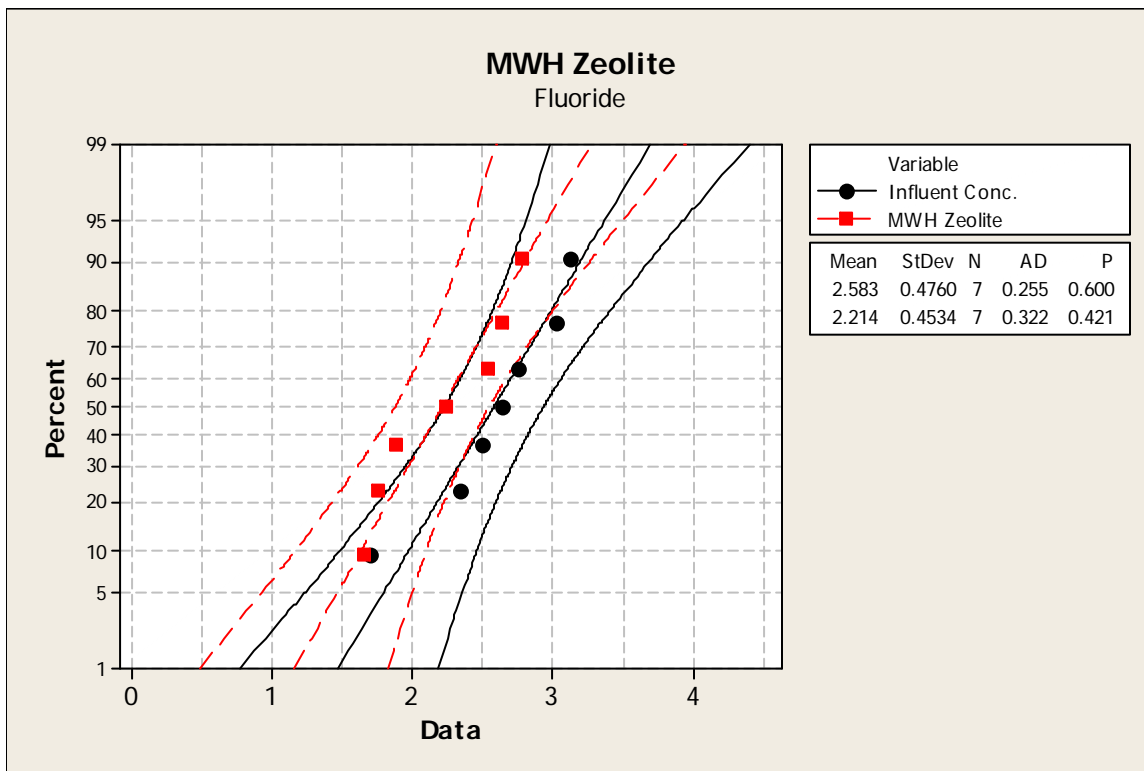


Figure A4-78. Probability plots for fluoride and site zeolite column.

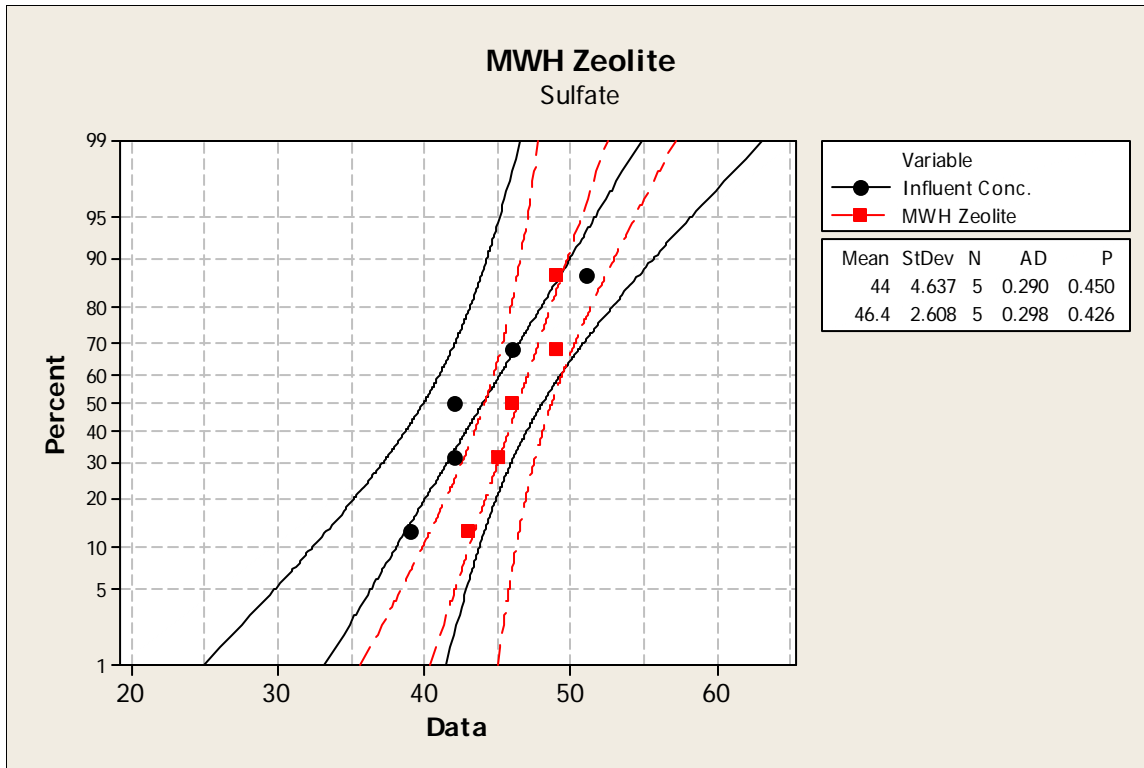


Figure A4-79. Probability plots for sulfate and site zeolite column.

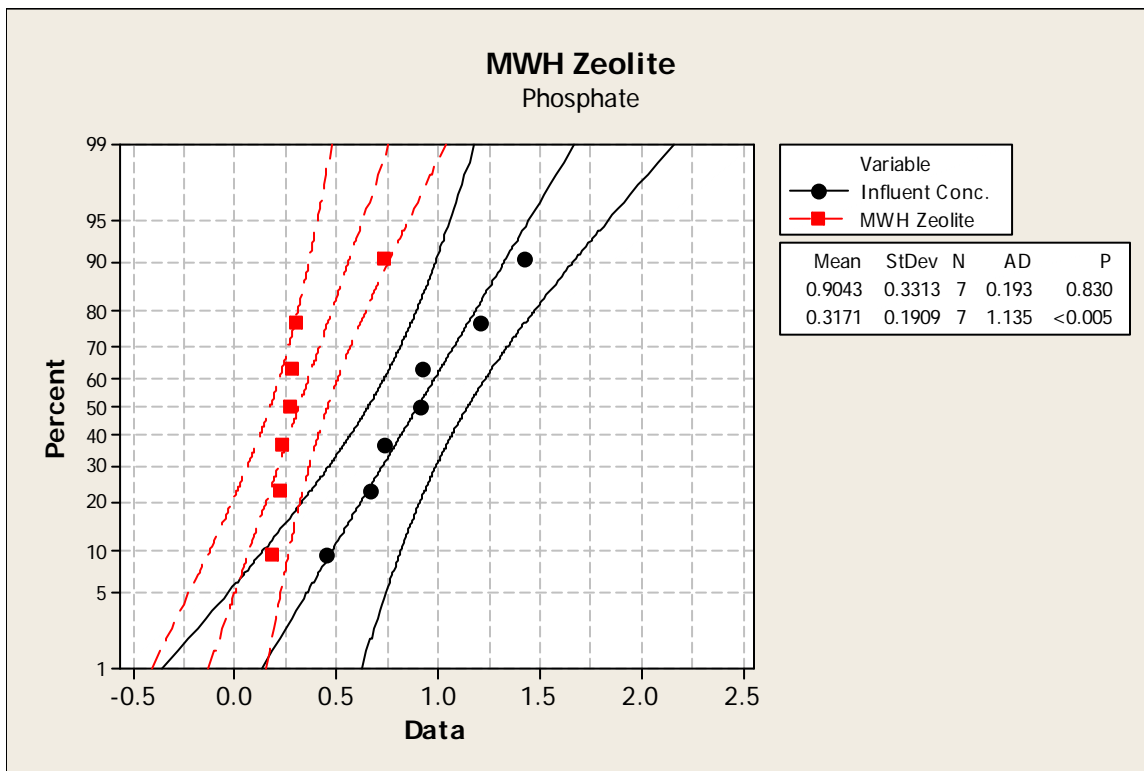


Figure A4-80. Probability plots for phosphate and site zeolite column.

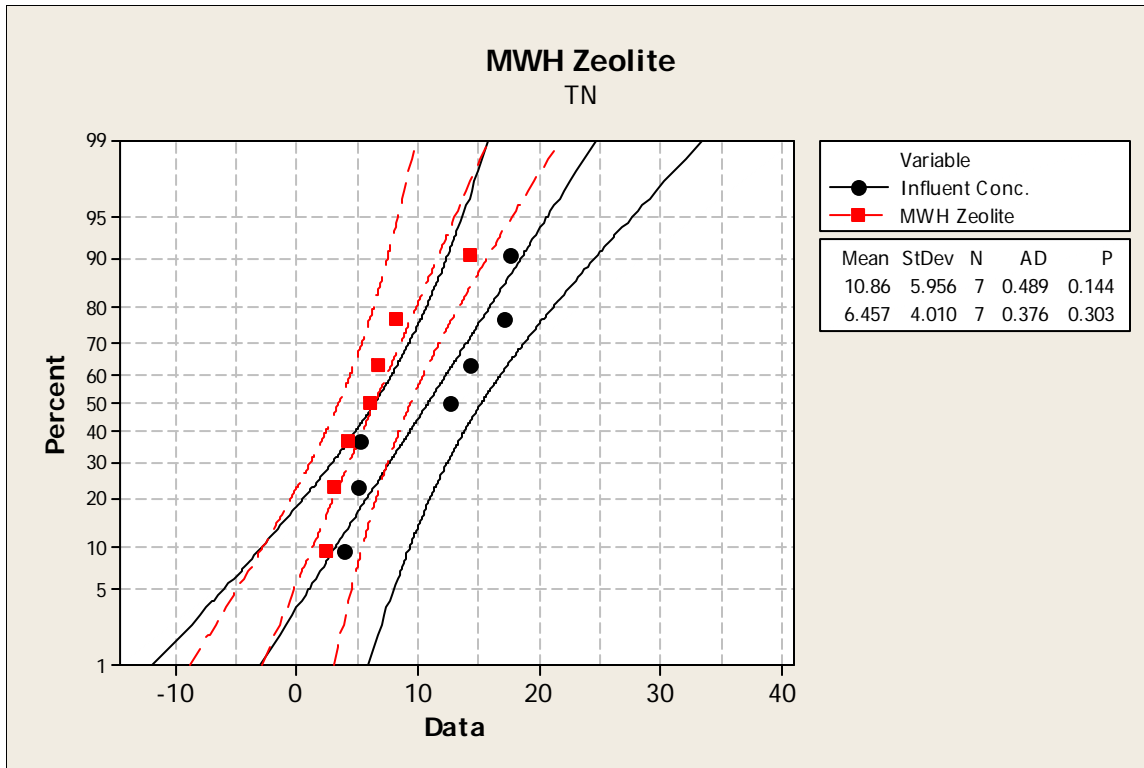


Figure A4-81. Probability plots for total nitrogen and site zeolite column.

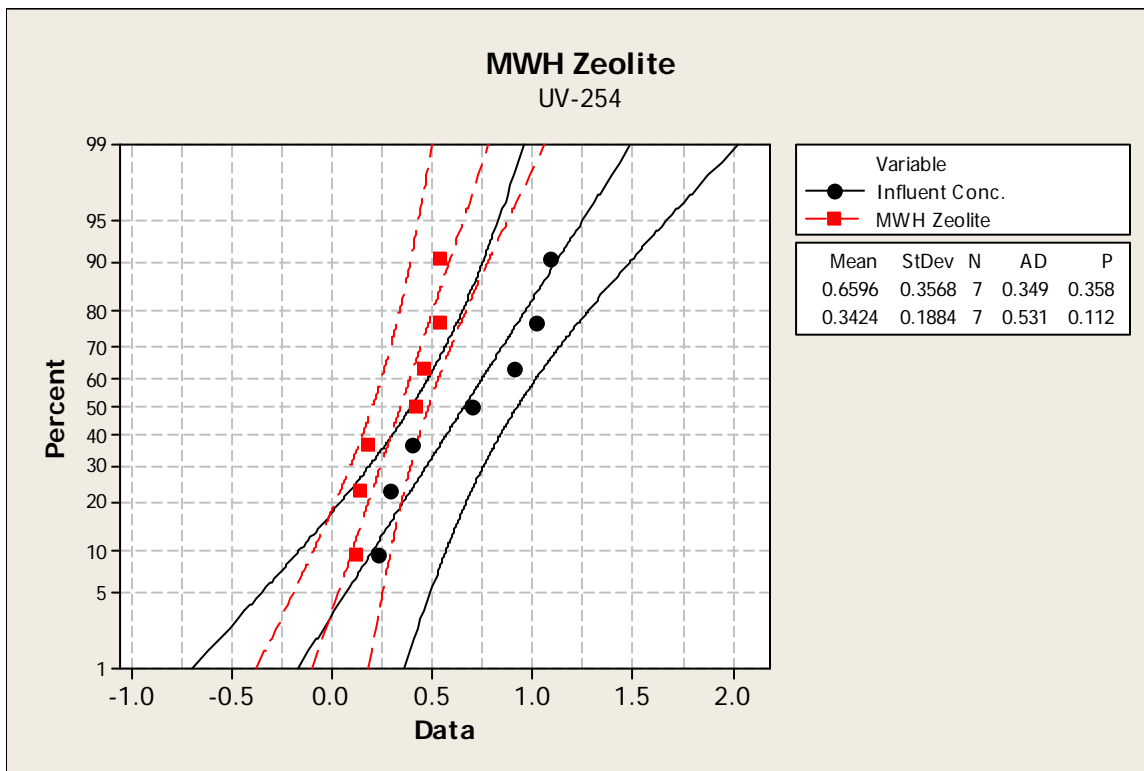


Figure A4-82. Probability plots for UV-254 and site zeolite column.

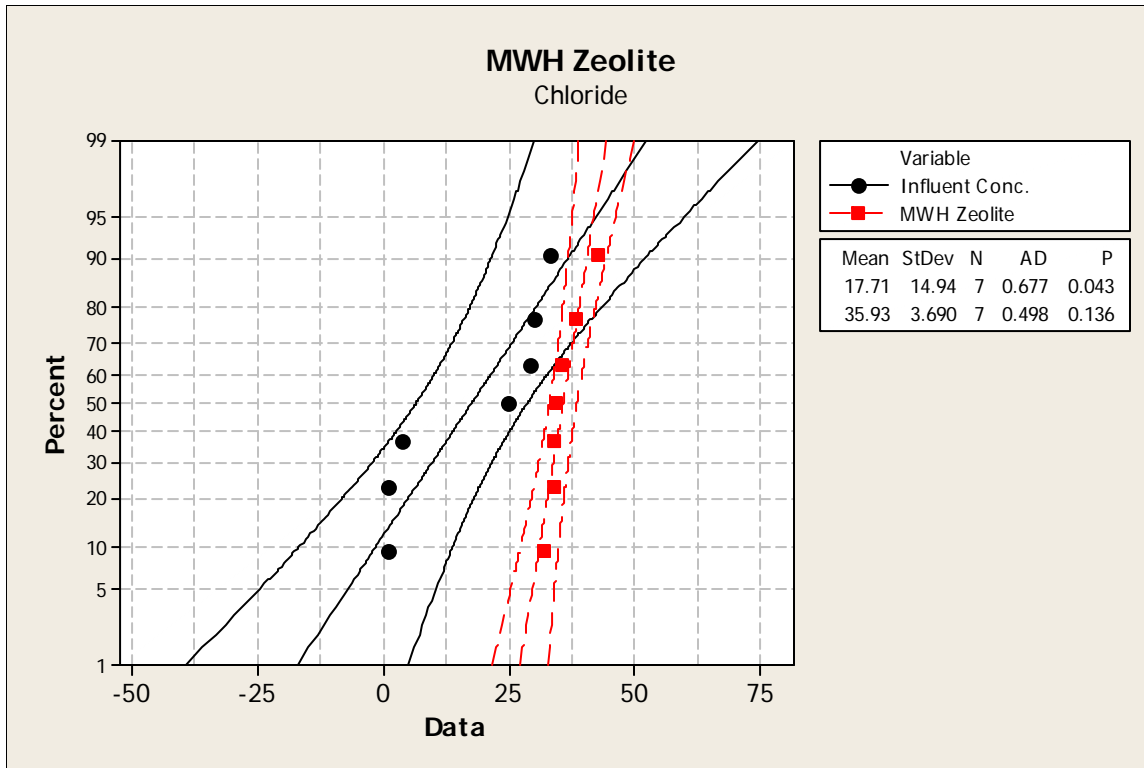


Figure A4-83. Probability plots for chloride and site zeolite column.

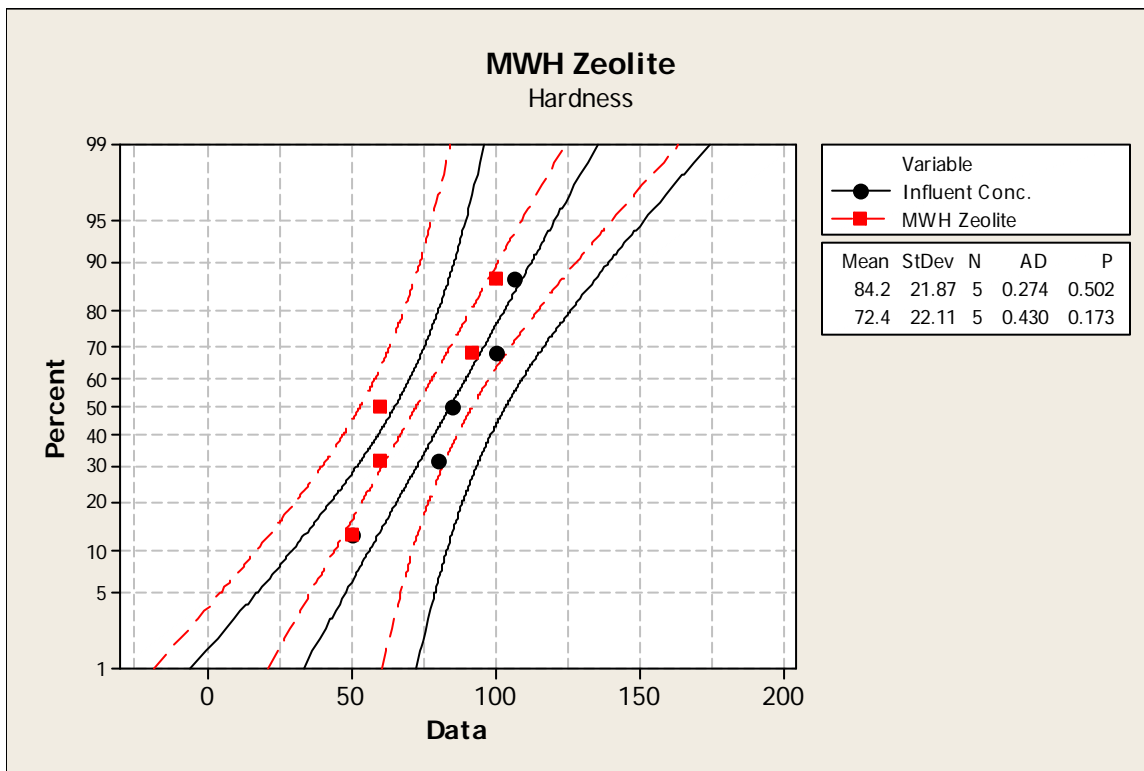


Figure A4-84. Probability plots for hardness and site zeolite column.

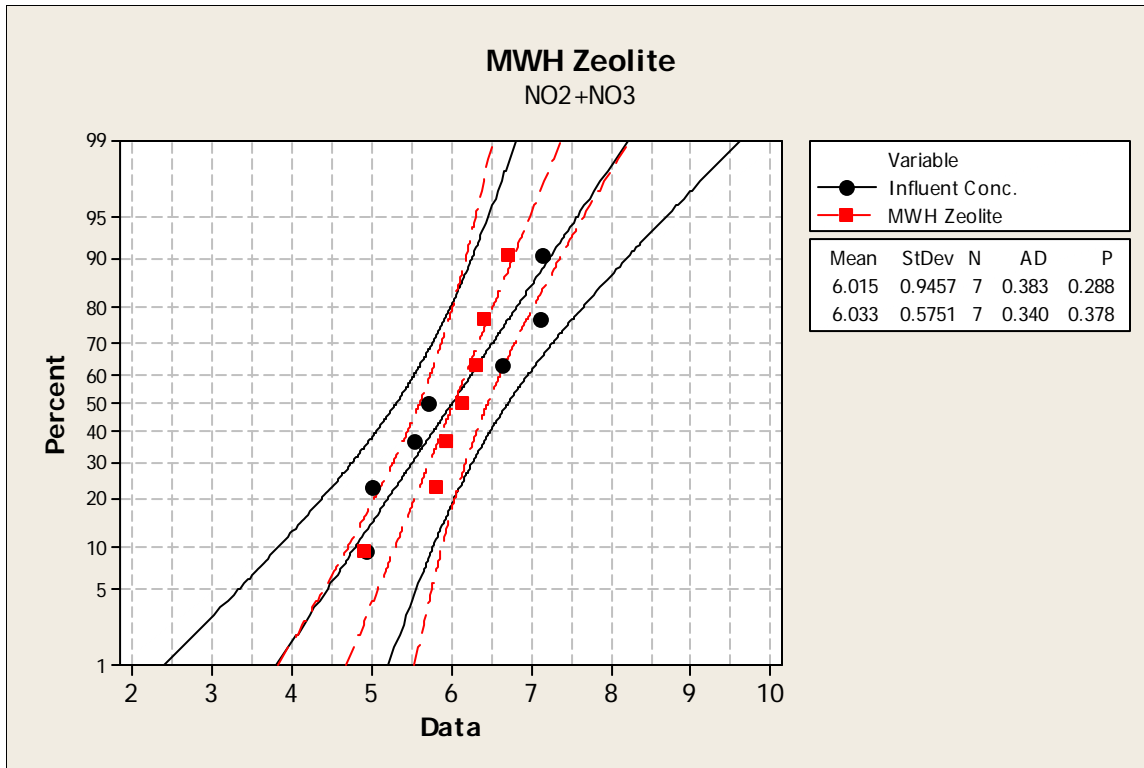


Figure A4-85. Probability plots for nitrite plus nitrate and site zeolite column.

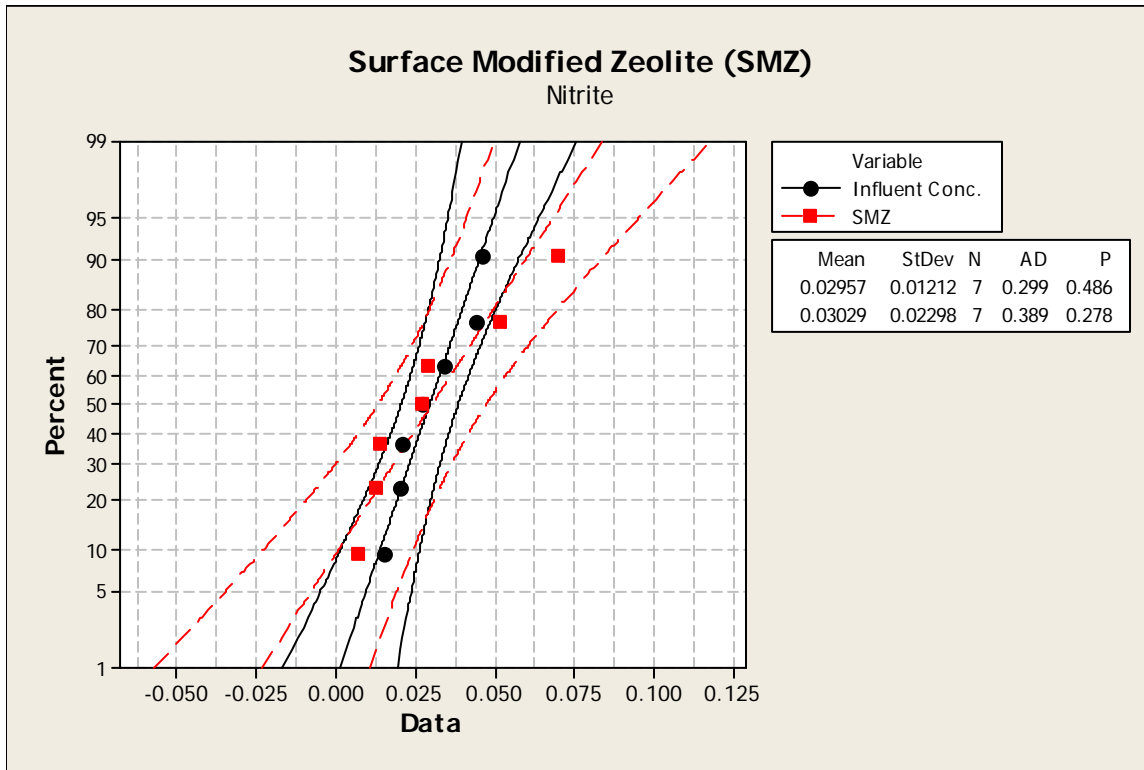


Figure A4-86. Probability plots for nitrite and surface modified zeolite column.

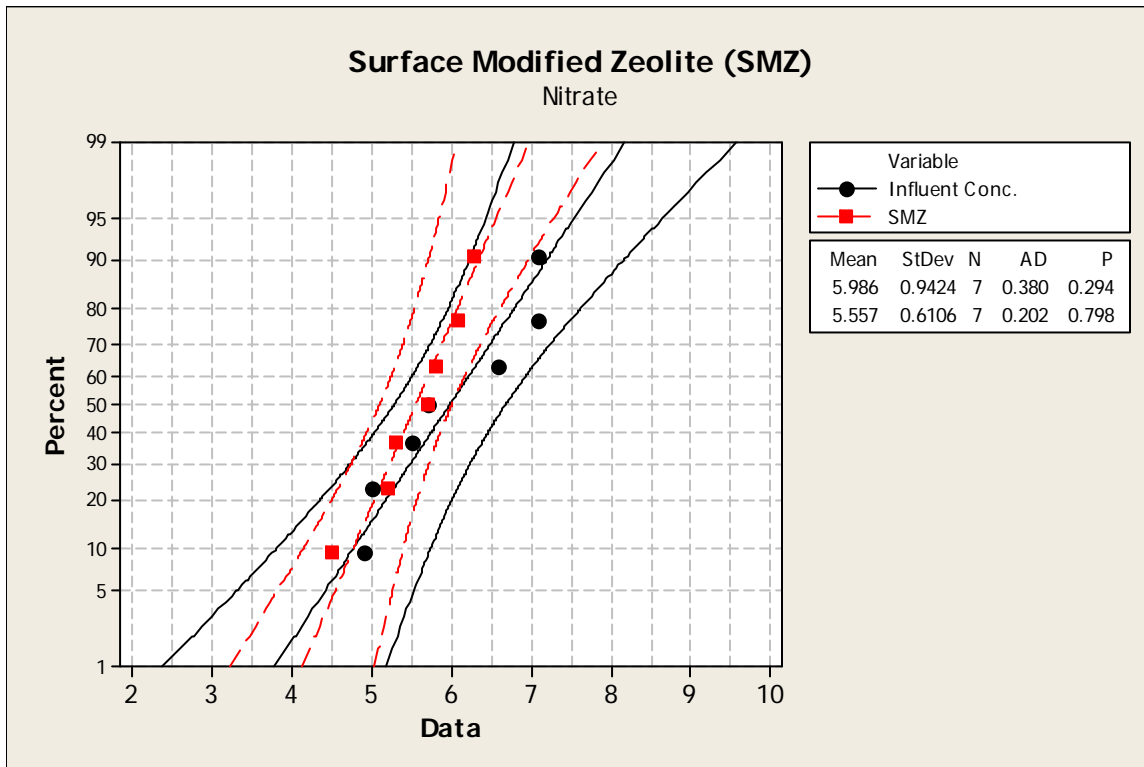


Figure A4-87. Probability plots for nitrate and surface modified zeolite column.

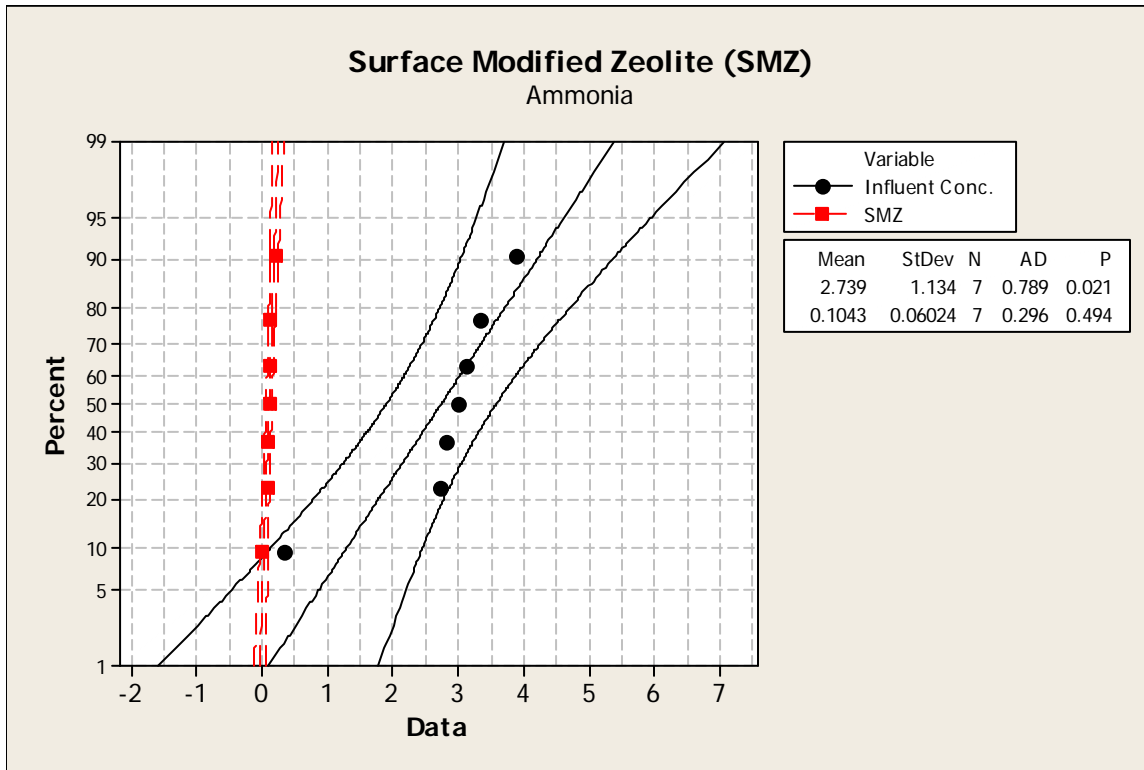


Figure A4-88. Probability plots for ammonia and surface modified zeolite column.

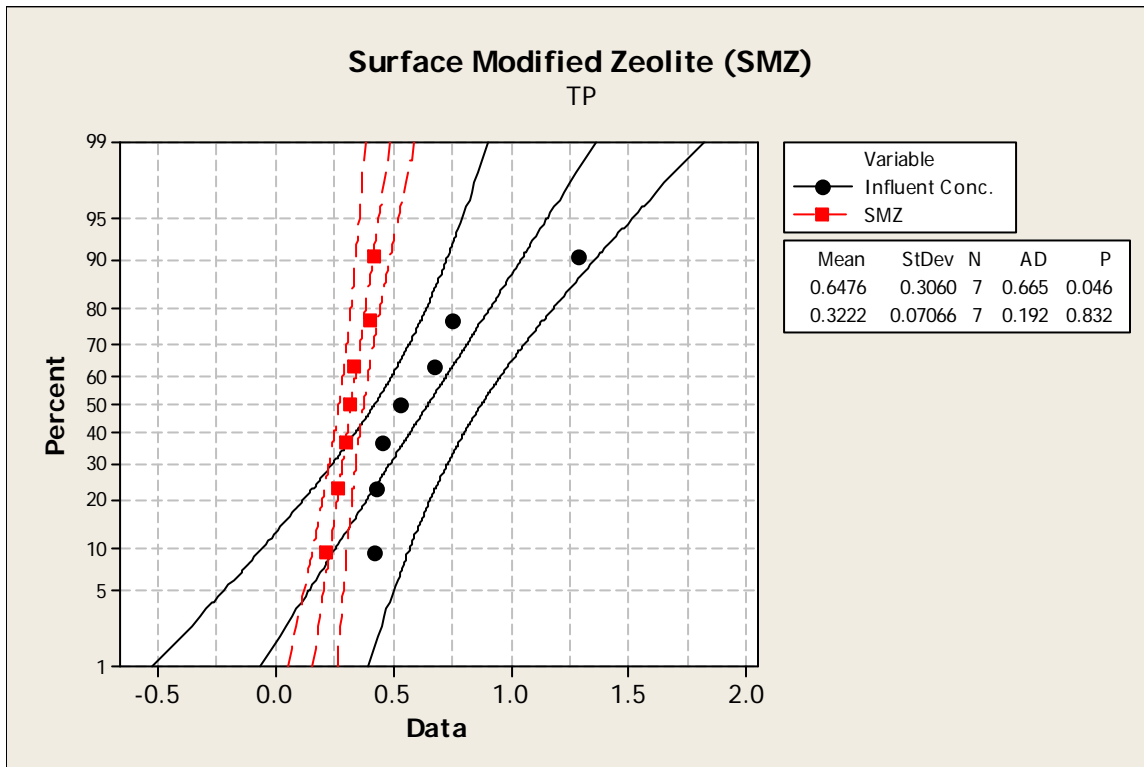


Figure A4-89. Probability plots for total phosphate and surface modified zeolite column.

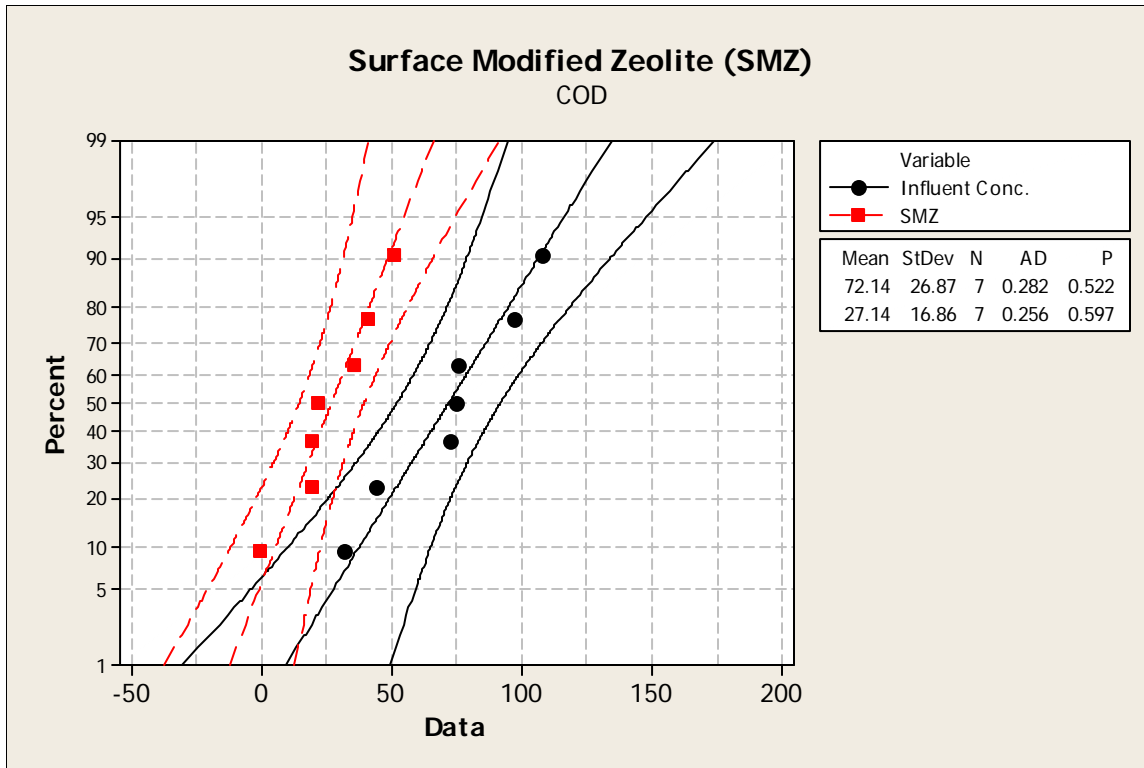


Figure A4-90. Probability plots for COD and surface modified zeolite column.

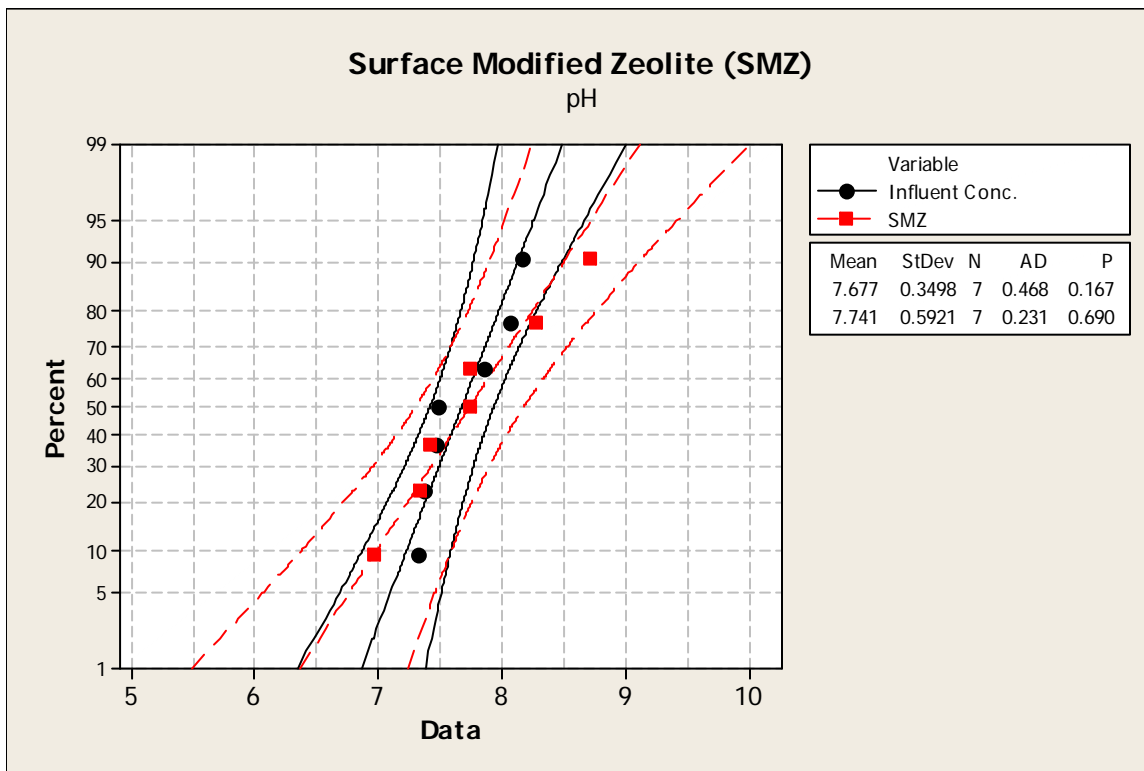


Figure A4-91. Probability plots for pH and surface modified zeolite column.

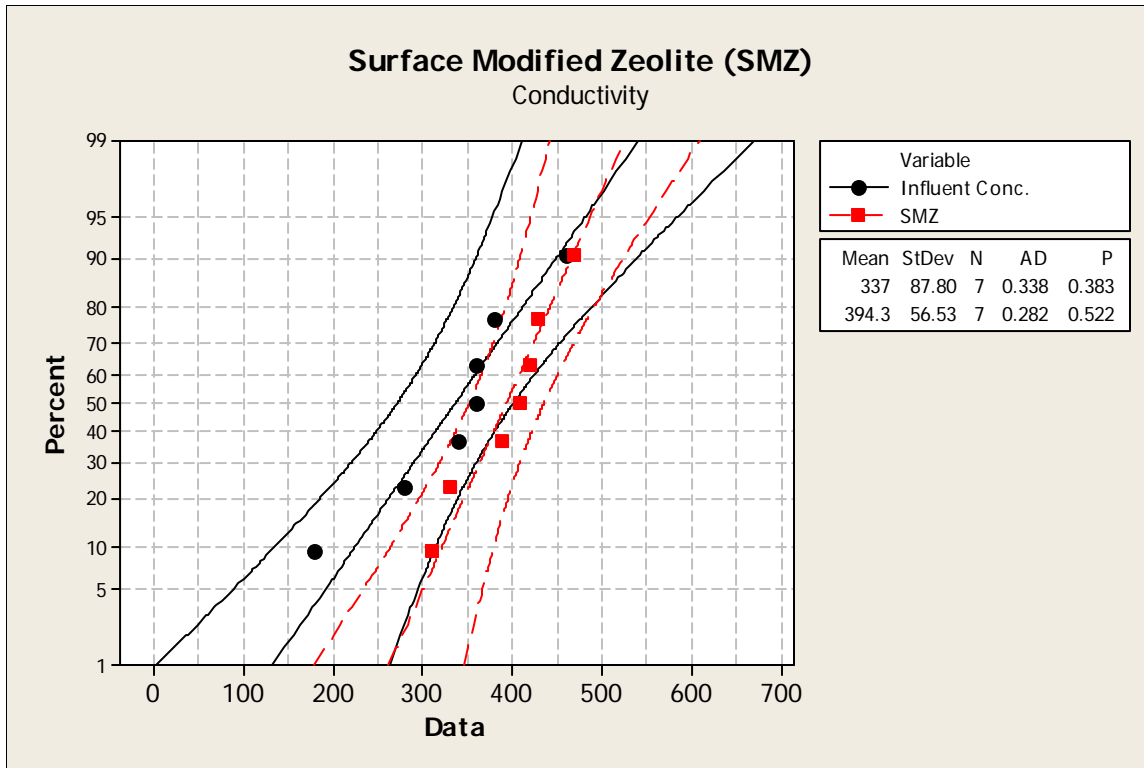


Figure A4-92. Probability plots for conductivity and surface modified zeolite column.

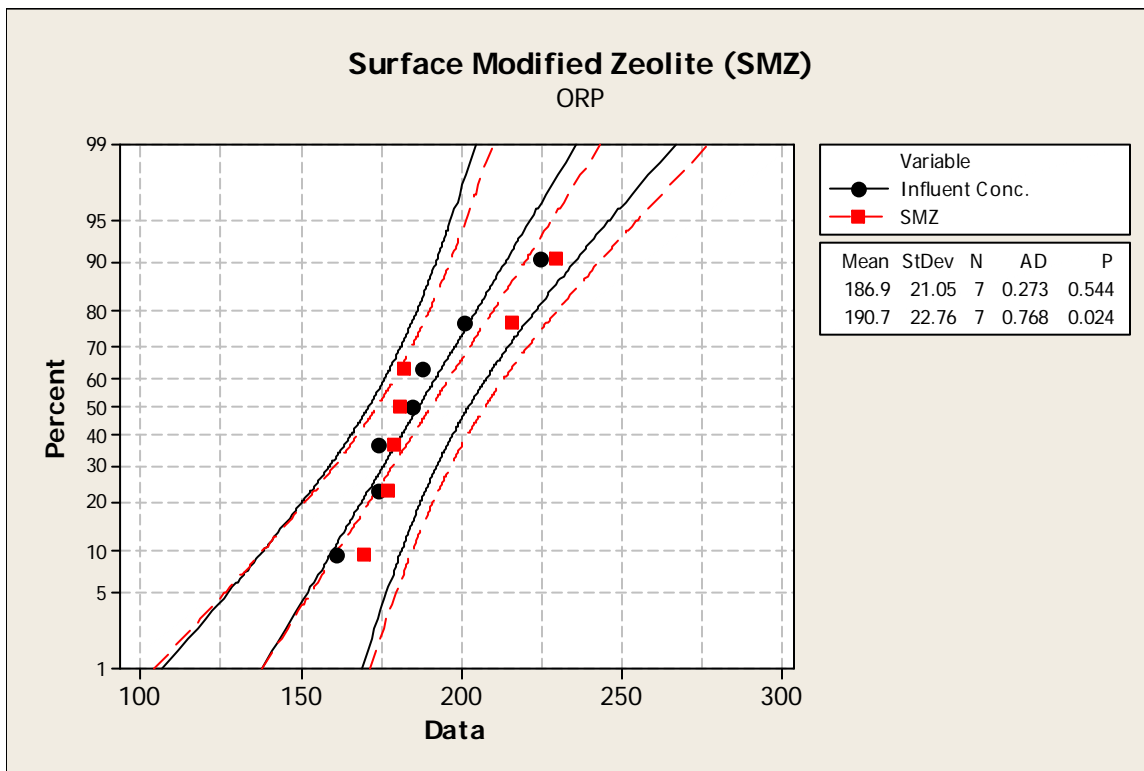


Figure A4-93. Probability plots for ORP and surface modified zeolite column.

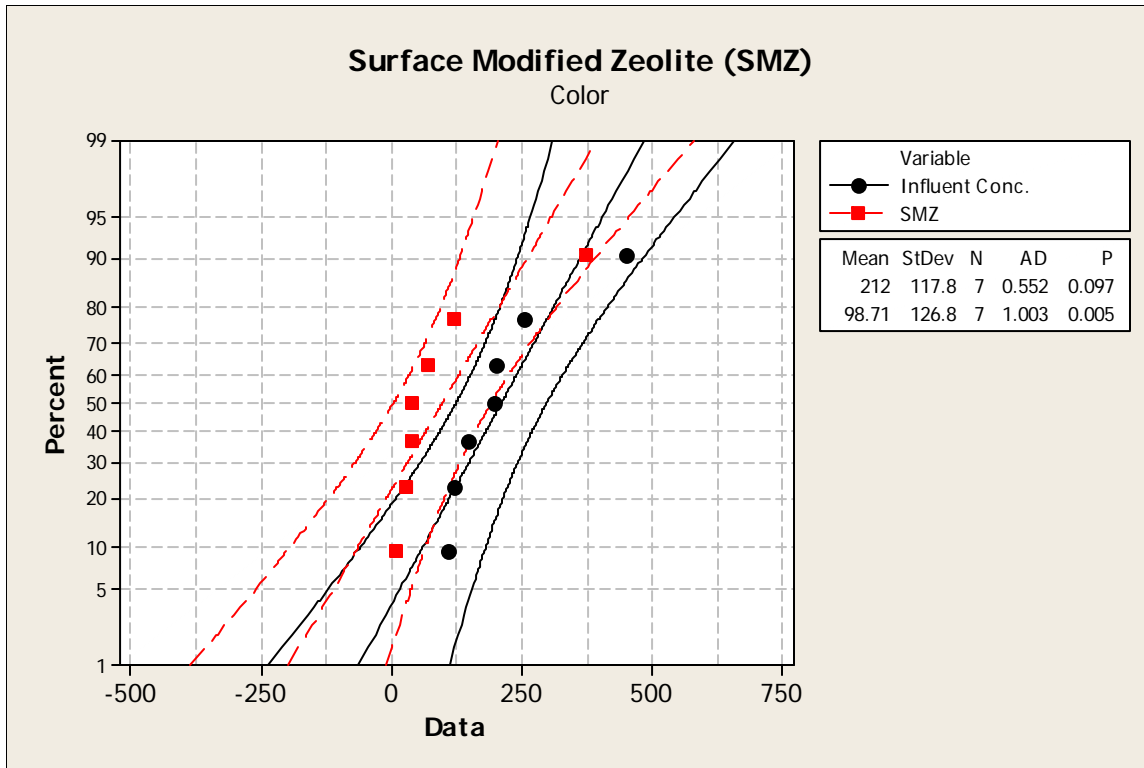


Figure A4-94. Probability plots for color and surface modified zeolite column.

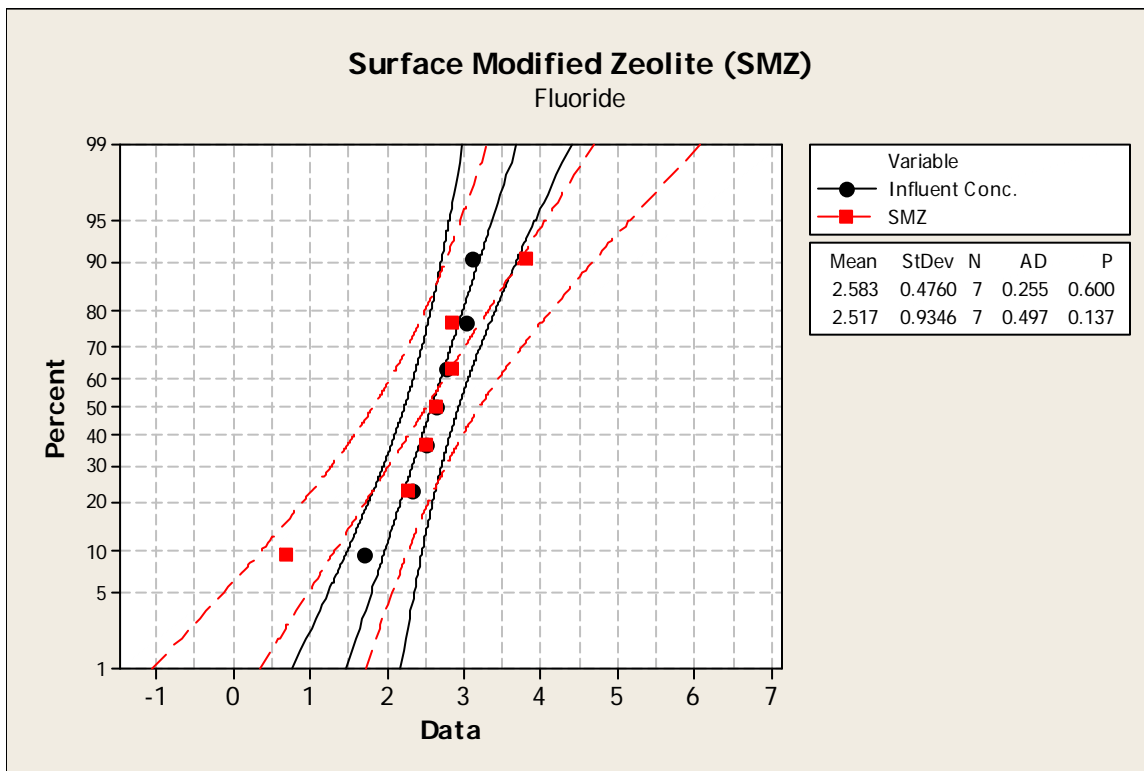


Figure A4-95. Probability plots for fluoride and surface modified zeolite column.

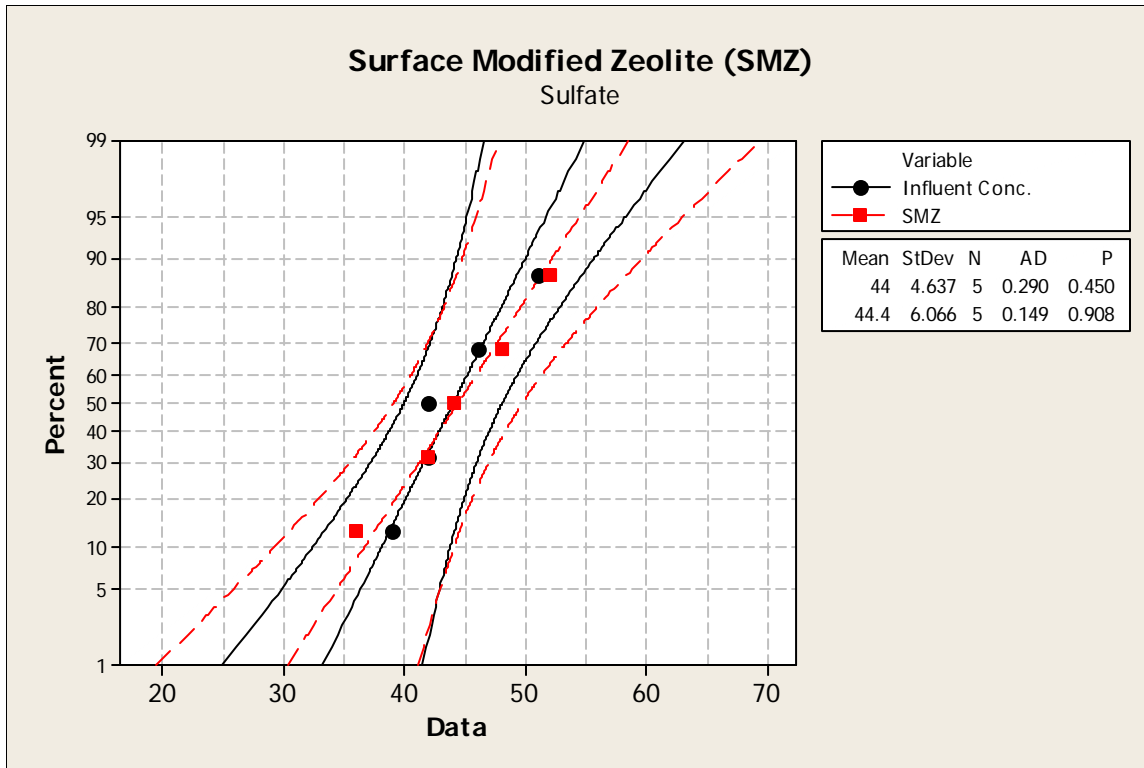


Figure A4-96. Probability plots for sulfate and surface modified zeolite column.

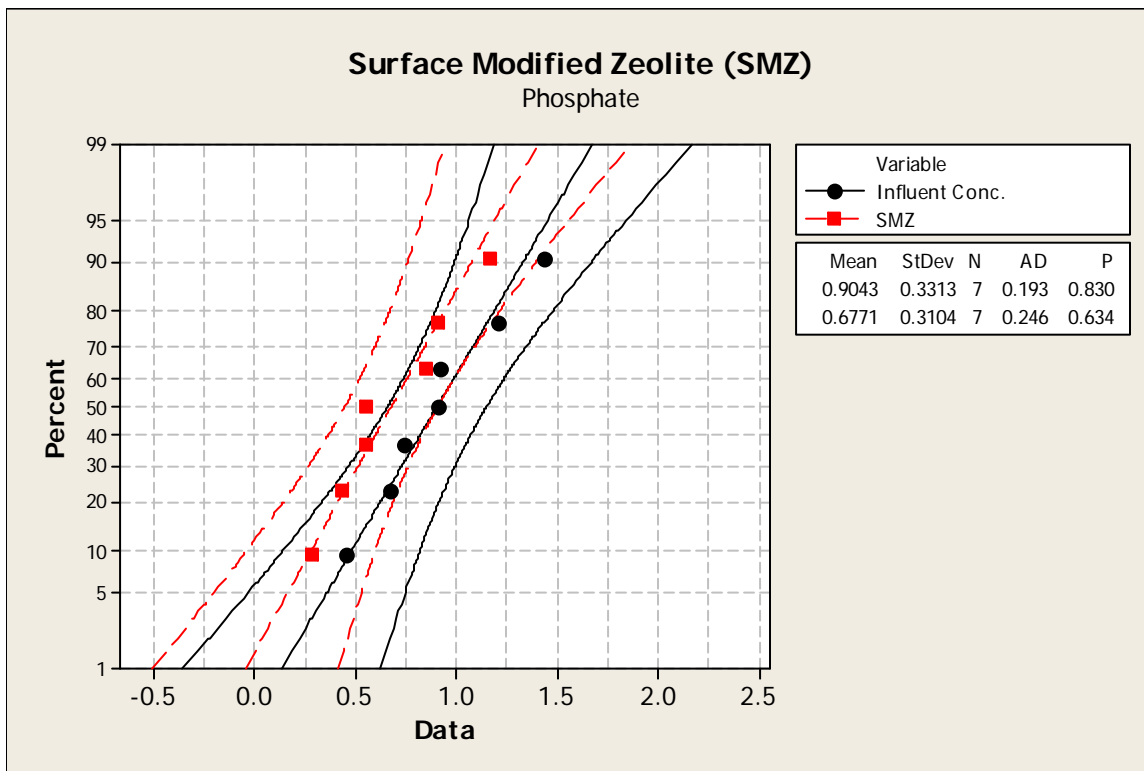


Figure A4-97. Probability plots for phosphate and surface modified zeolite column.

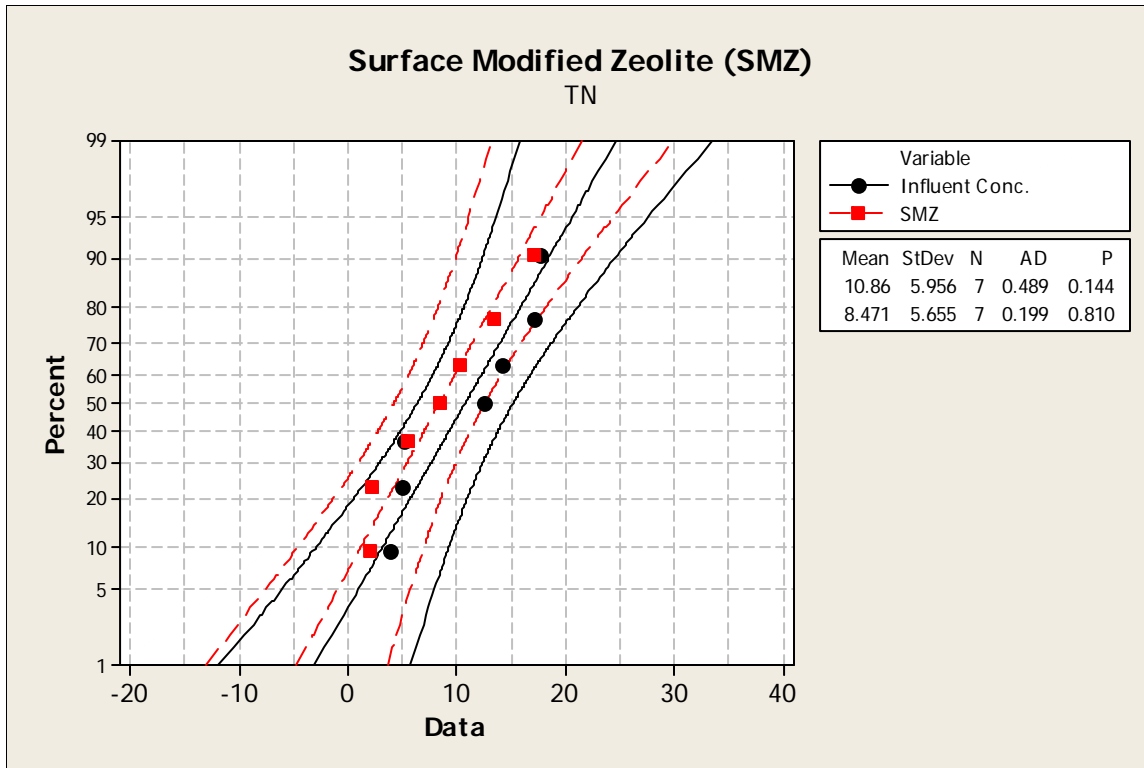


Figure A4-98. Probability plots for total nitrogen and surface modified zeolite column.

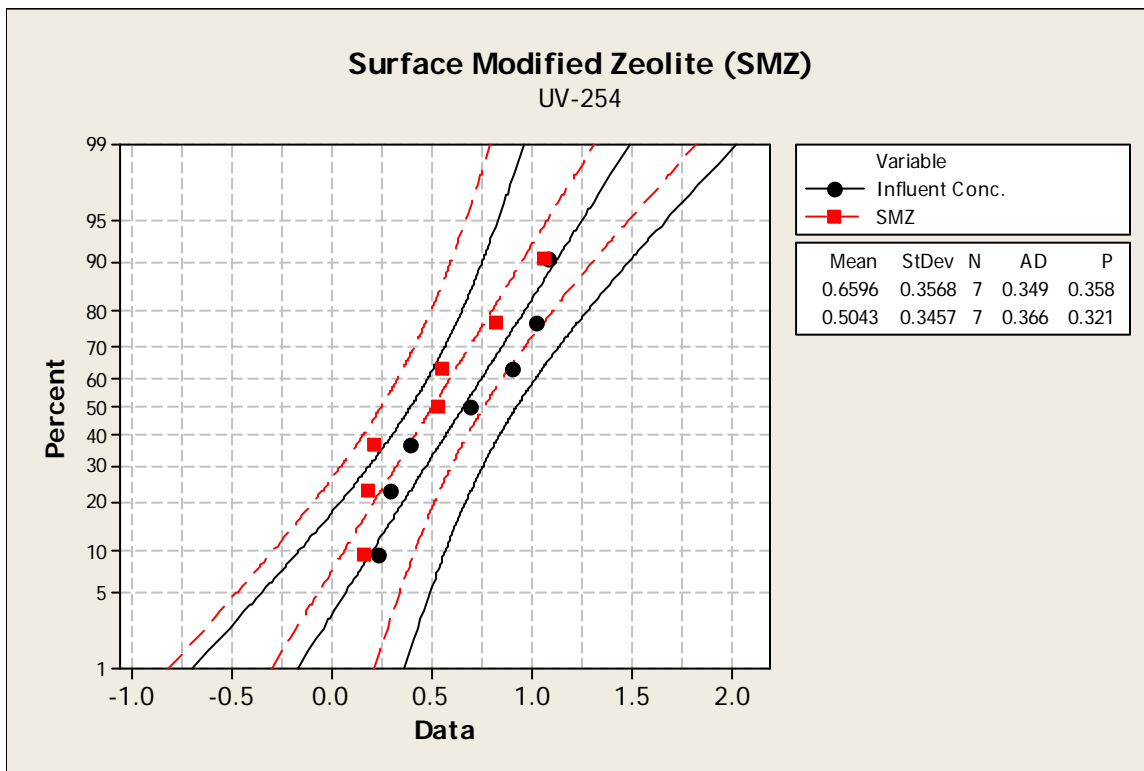


Figure A4-99. Probability plots for UV-254 and surface modified zeolite column.

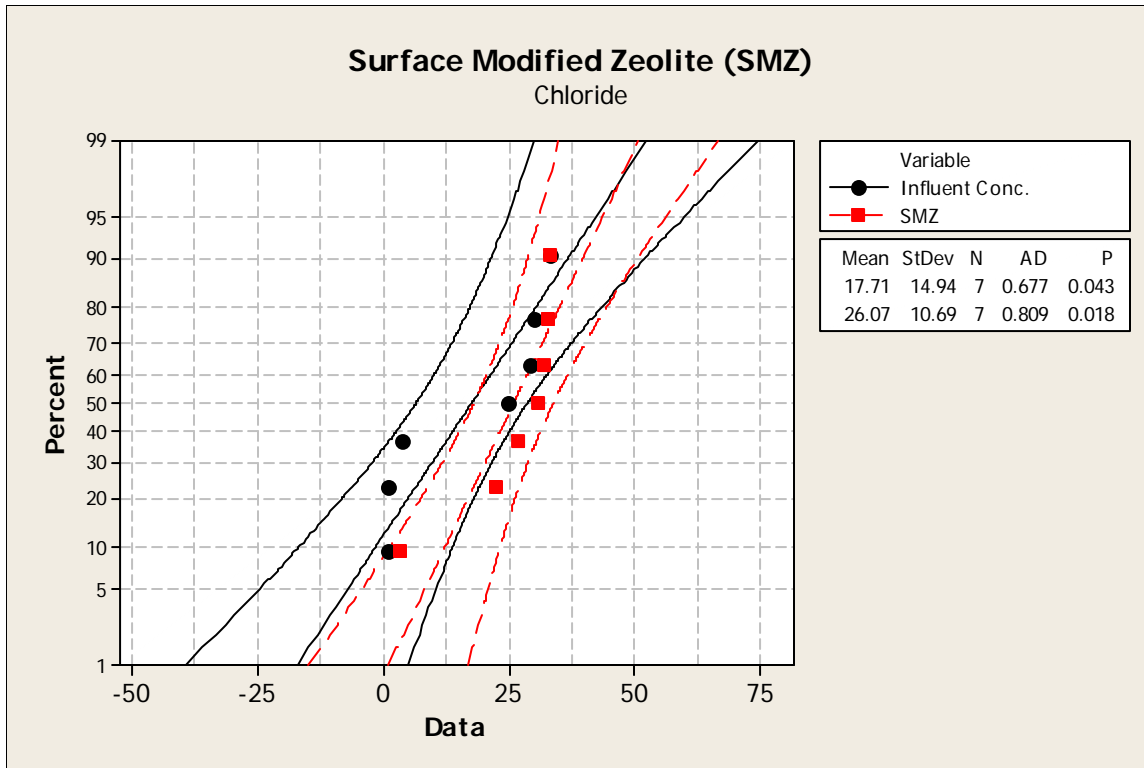


Figure A4-100. Probability plots for chloride and surface modified zeolite column.

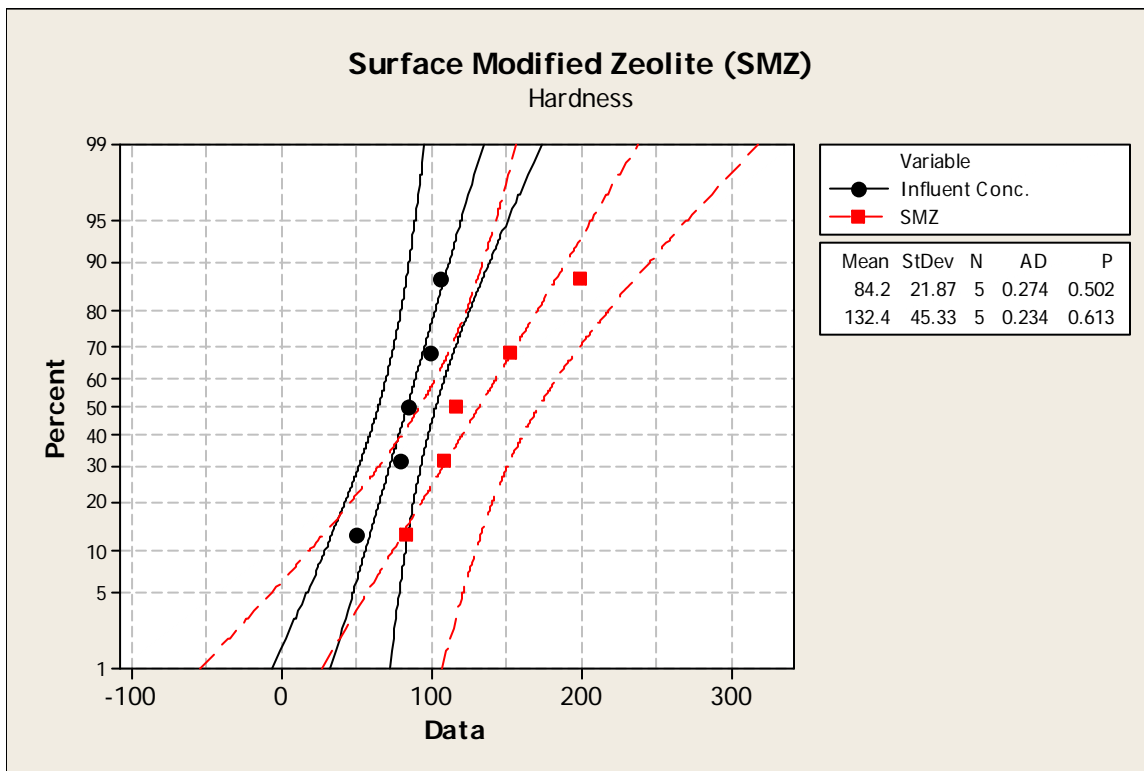


Figure A4-101. Probability plots for hardness and surface modified zeolite column.

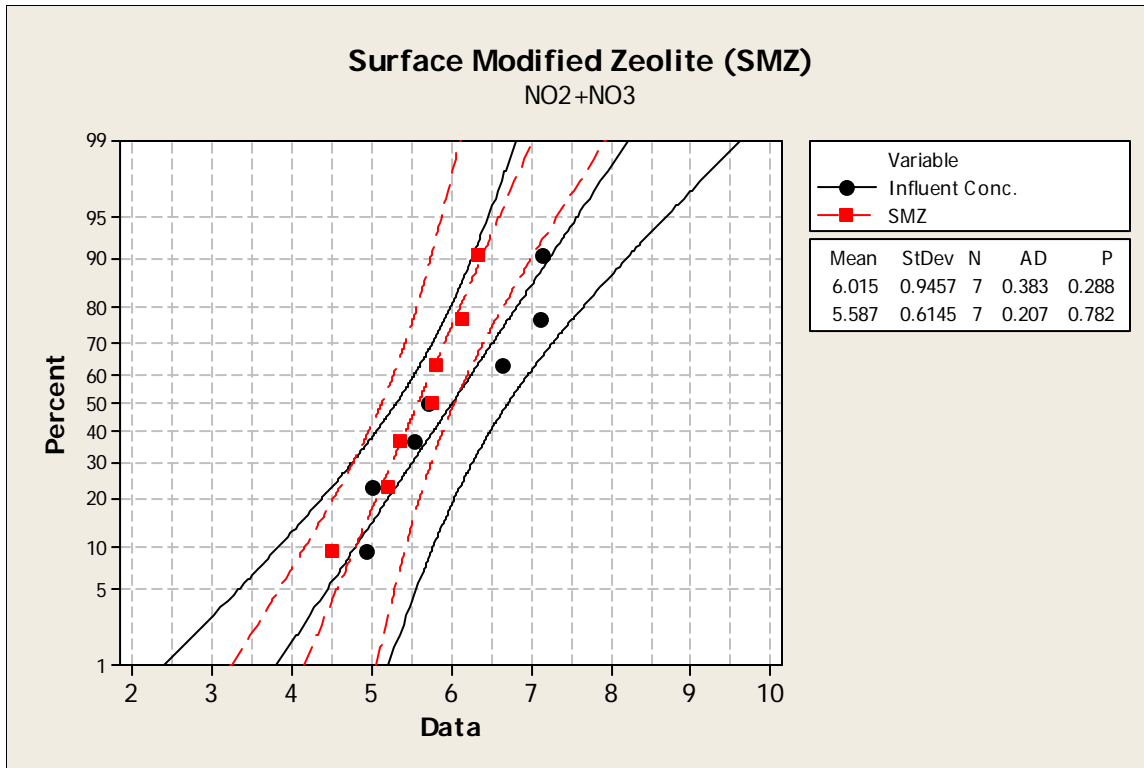


Figure A4-102. Probability plots for nitrite plus nitrate and surface modified zeolite column.

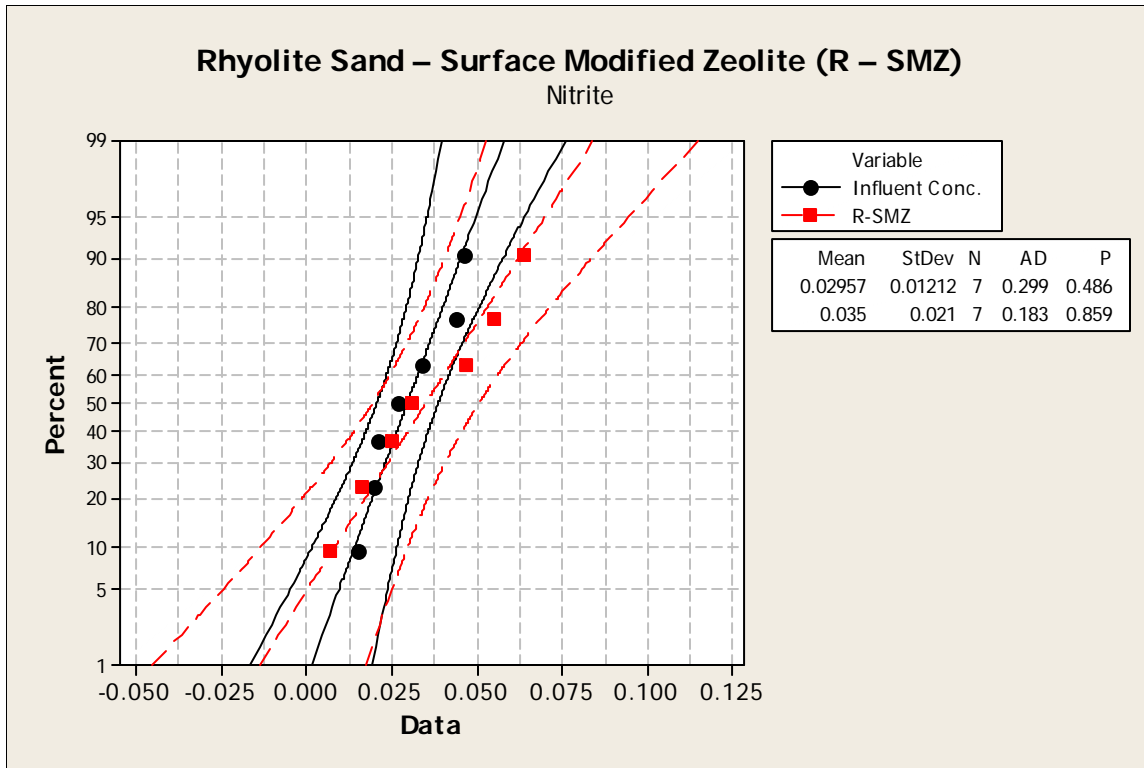


Figure A4-103. Probability plots for nitrite and R and SMZ mixed media column.

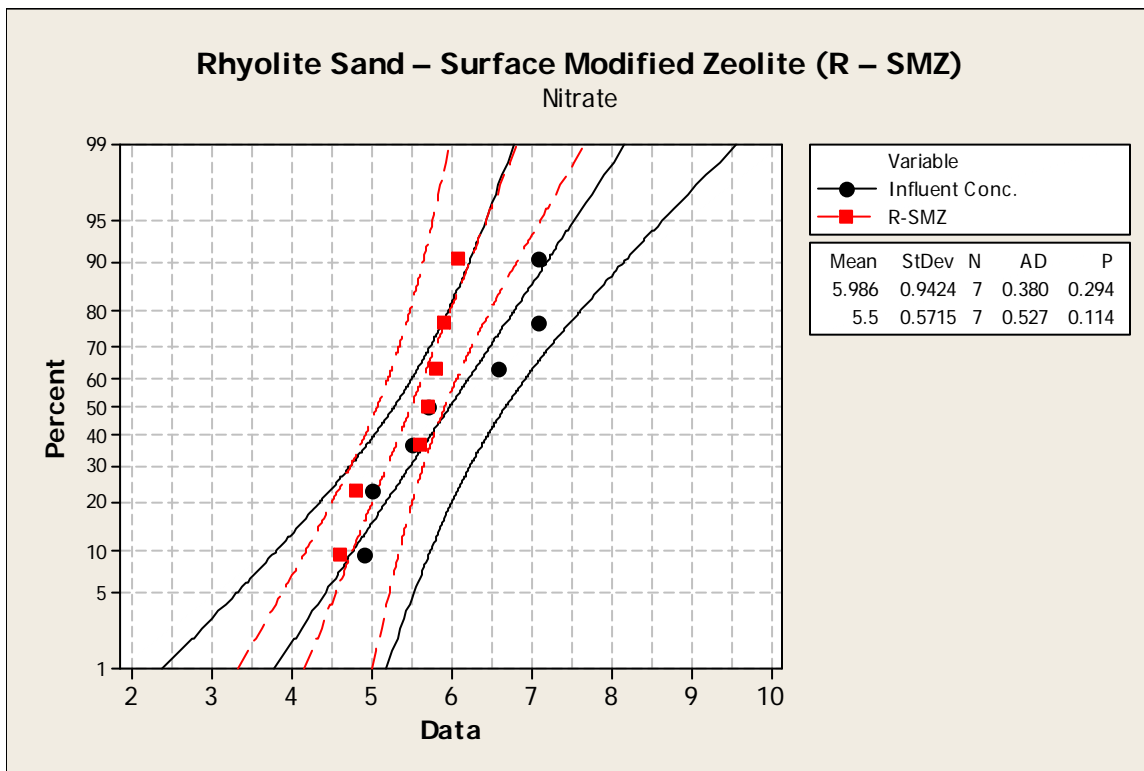


Figure A4-104. Probability plots for nitrate and R and SMZ mixed media column.

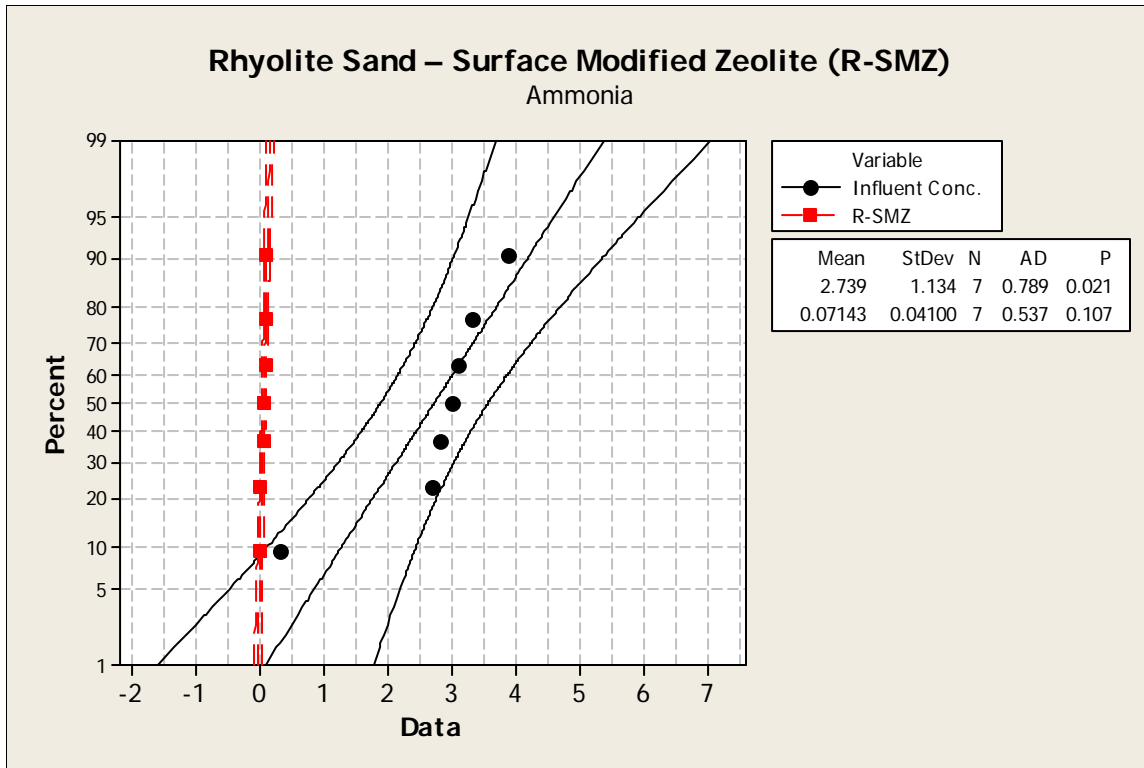


Figure A4-105. Probability plots for ammonia and R and SMZ mixed media column.

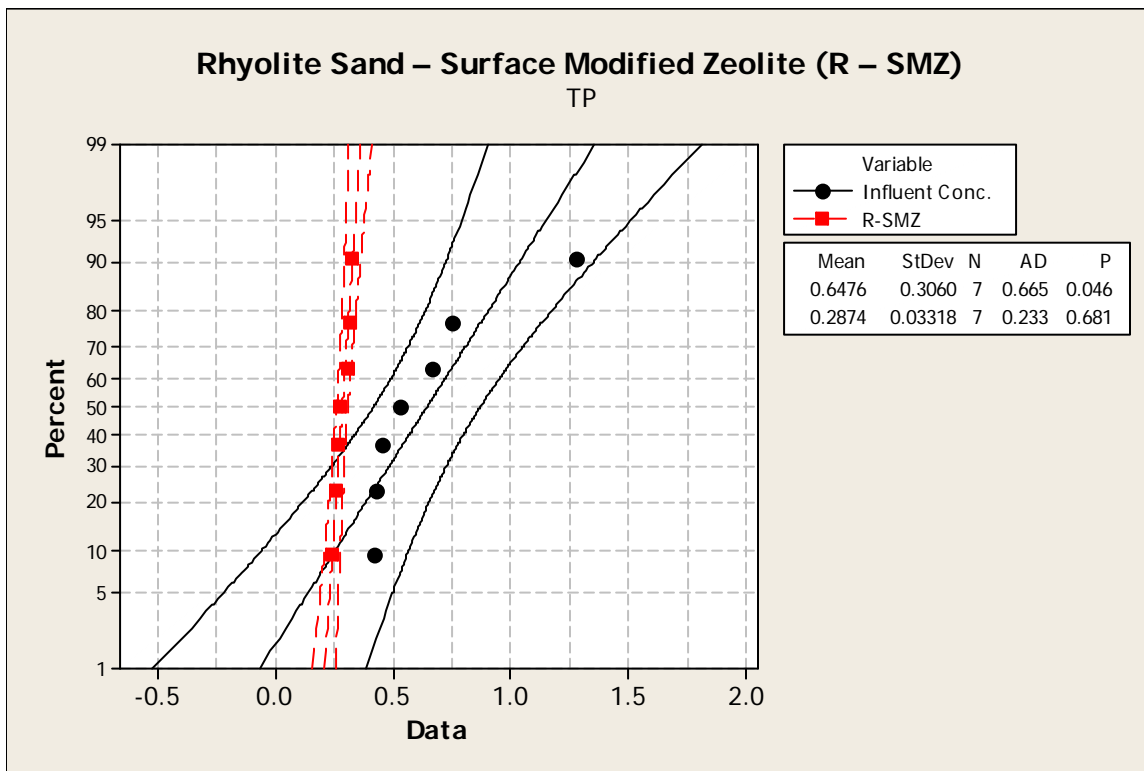


Figure A4-106. Probability plots for total phosphorus and R and SMZ mixed media column.

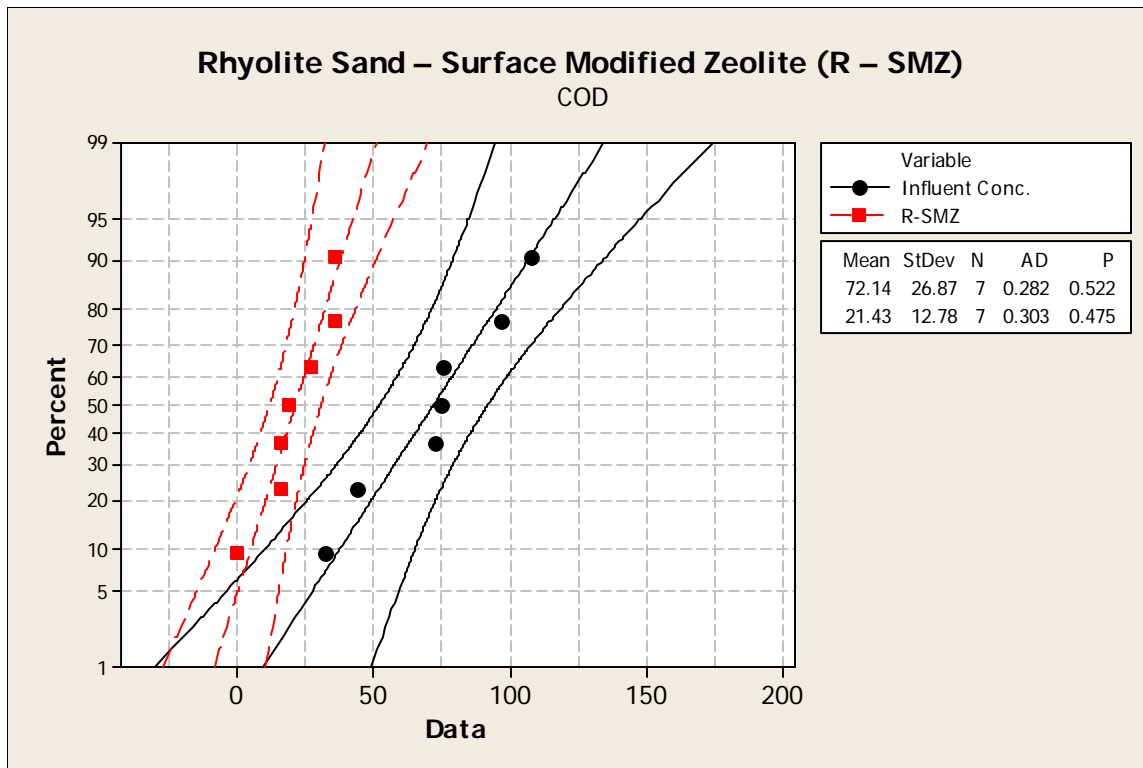


Figure A4-107. Probability plots for COD and R and SMZ mixed media column.

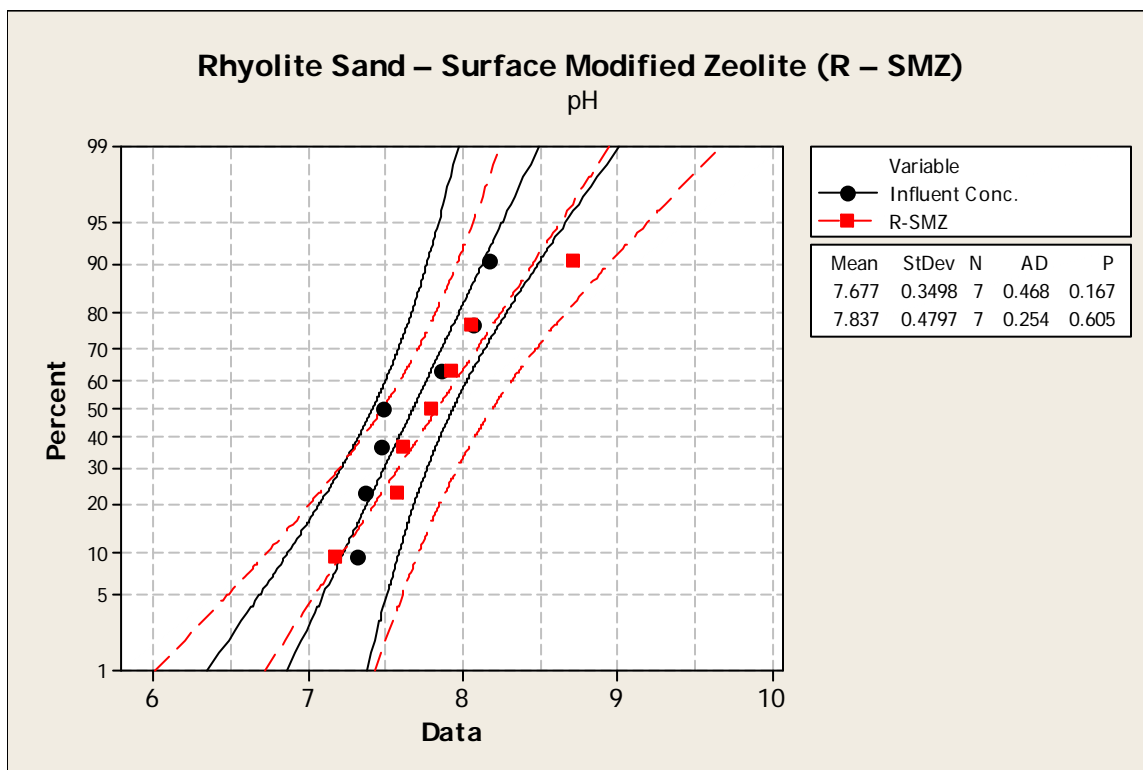


Figure A4-108. Probability plots for pH and R and SMZ mixed media column.

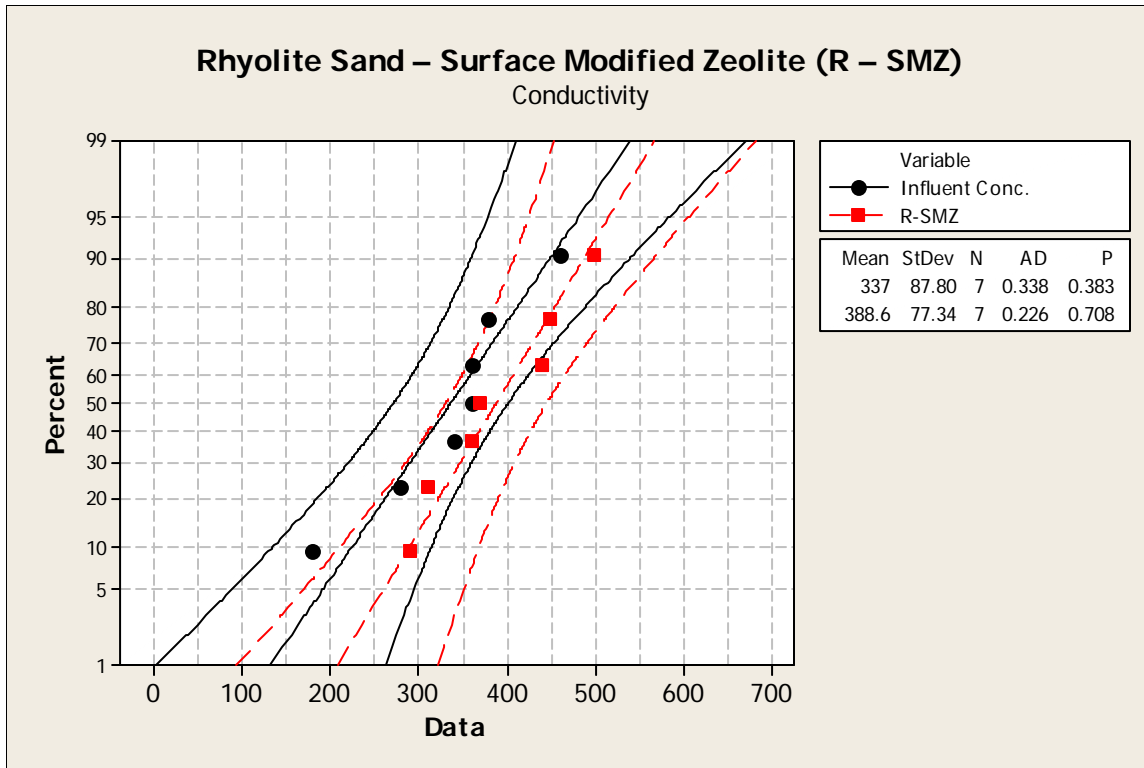


Figure A4-109. Probability plots for conductivity and R and SMZ mixed media column.

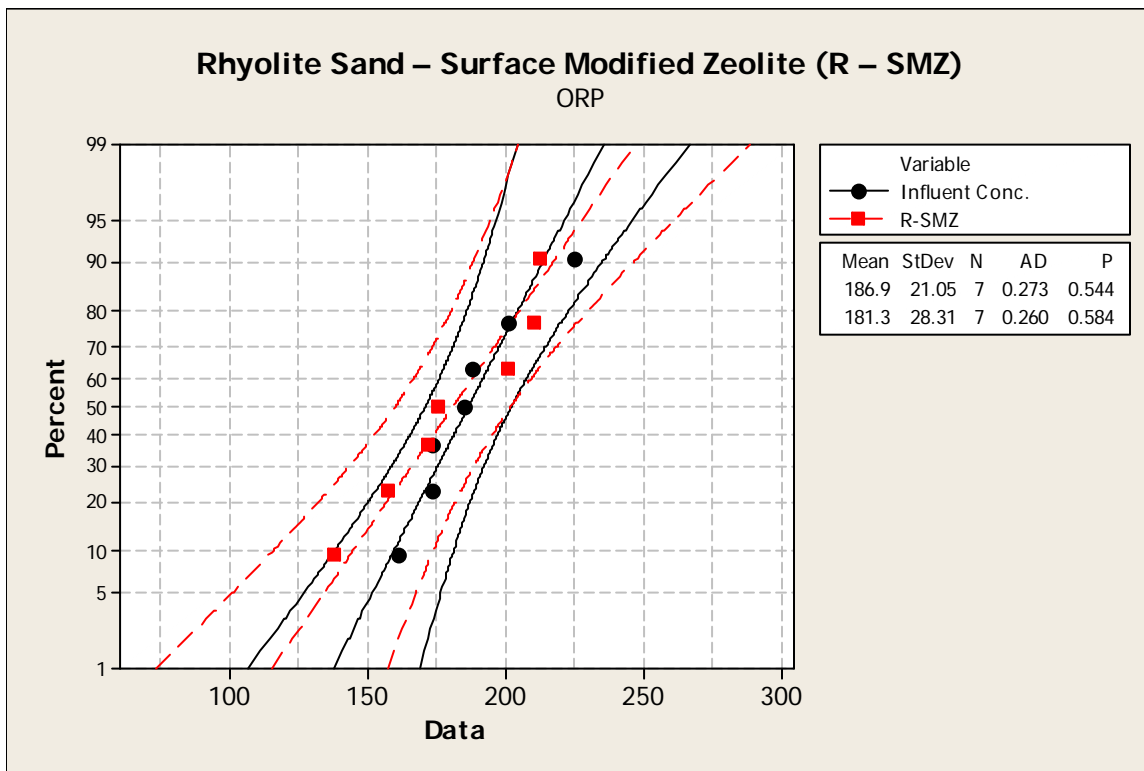


Figure A4-110. Probability plots for ORP and R and SMZ mixed media column.

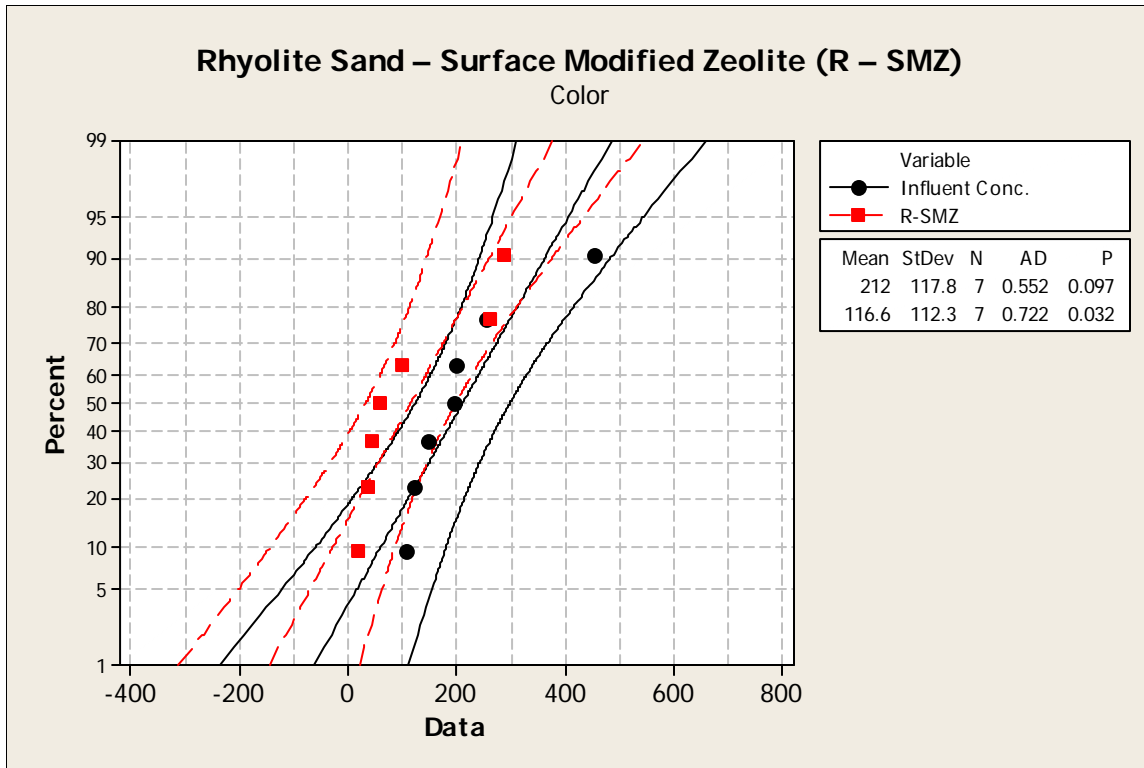


Figure A4-111. Probability plots for color and R and SMZ mixed media column.

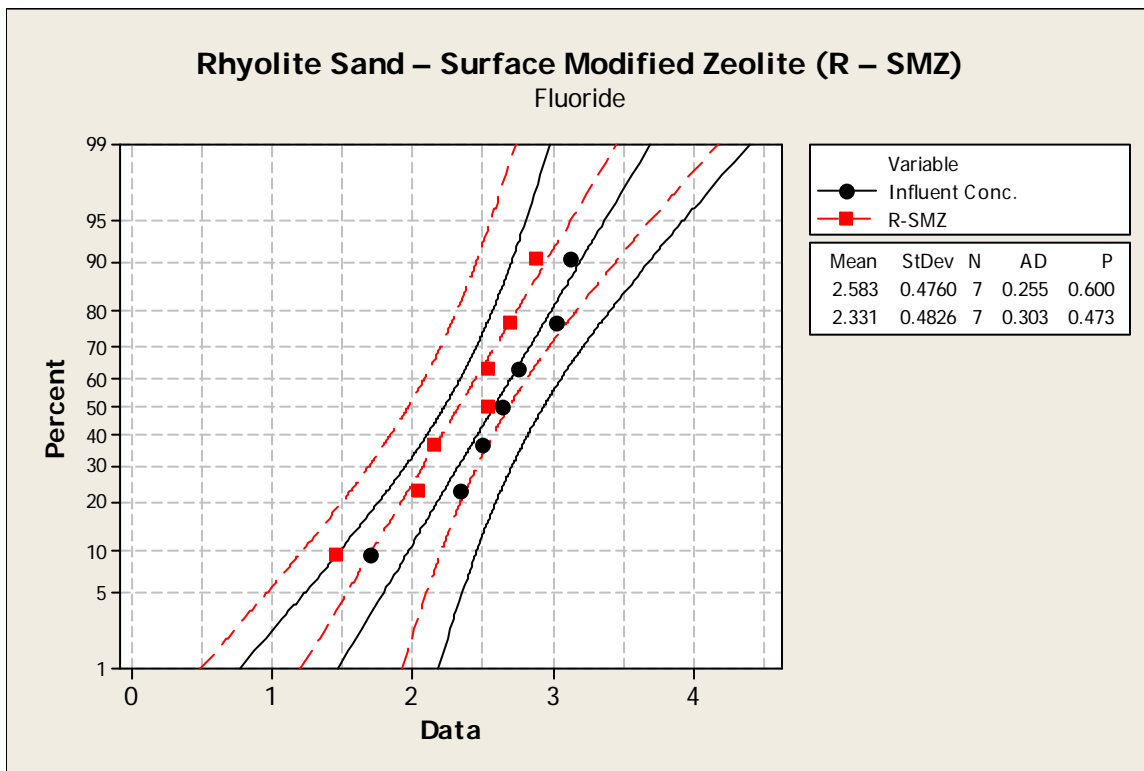


Figure A4-112. Probability plots for fluoride and R and SMZ mixed media column.

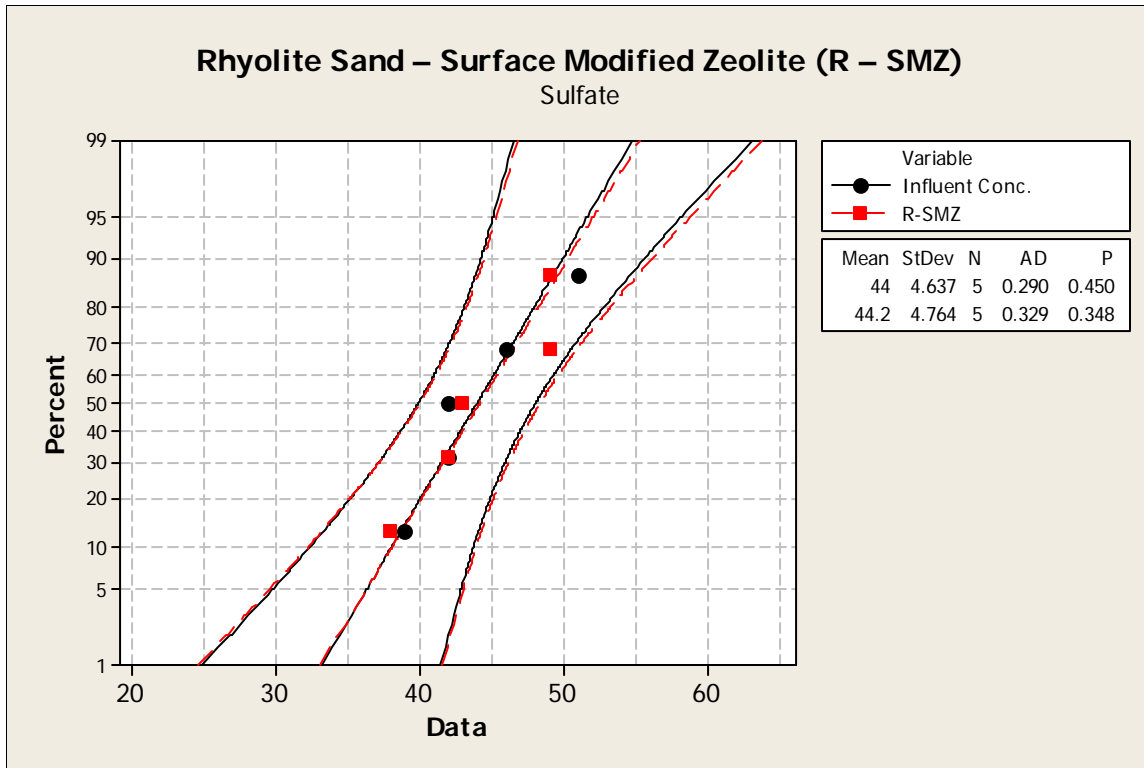


Figure A4-113. Probability plots for sulfate and R and SMZ mixed media column.

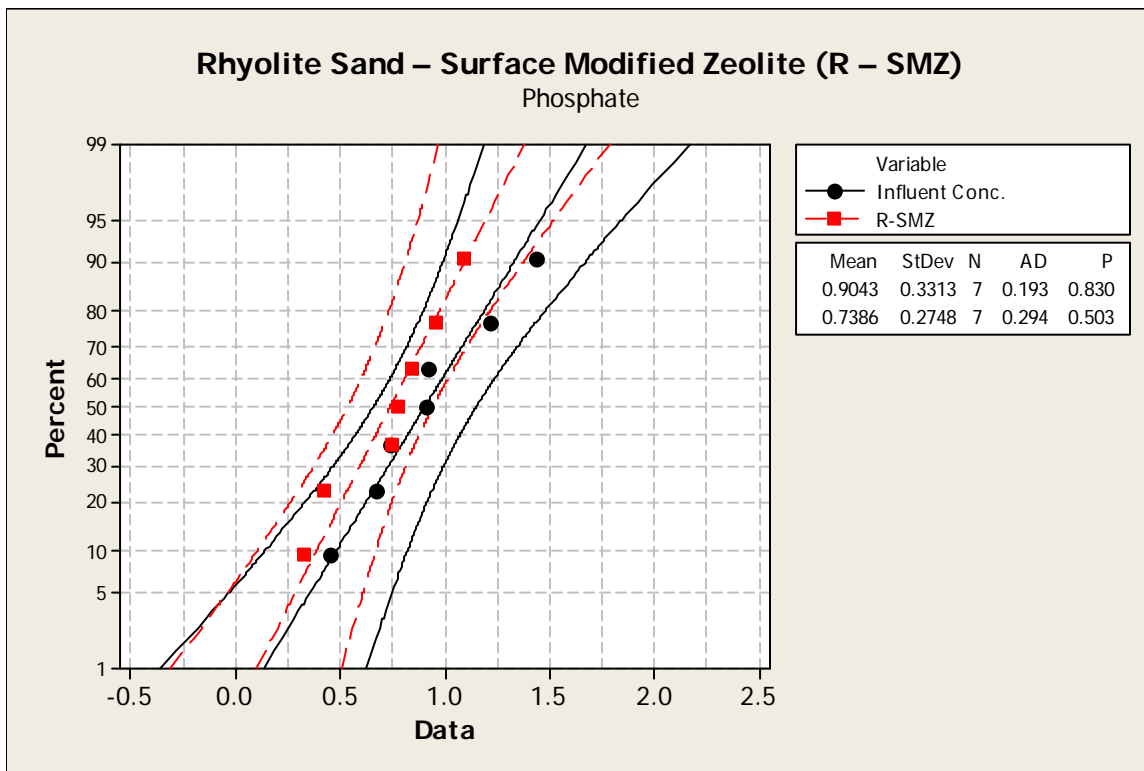


Figure A4-114. Probability plots for phosphate and R and SMZ mixed media column.

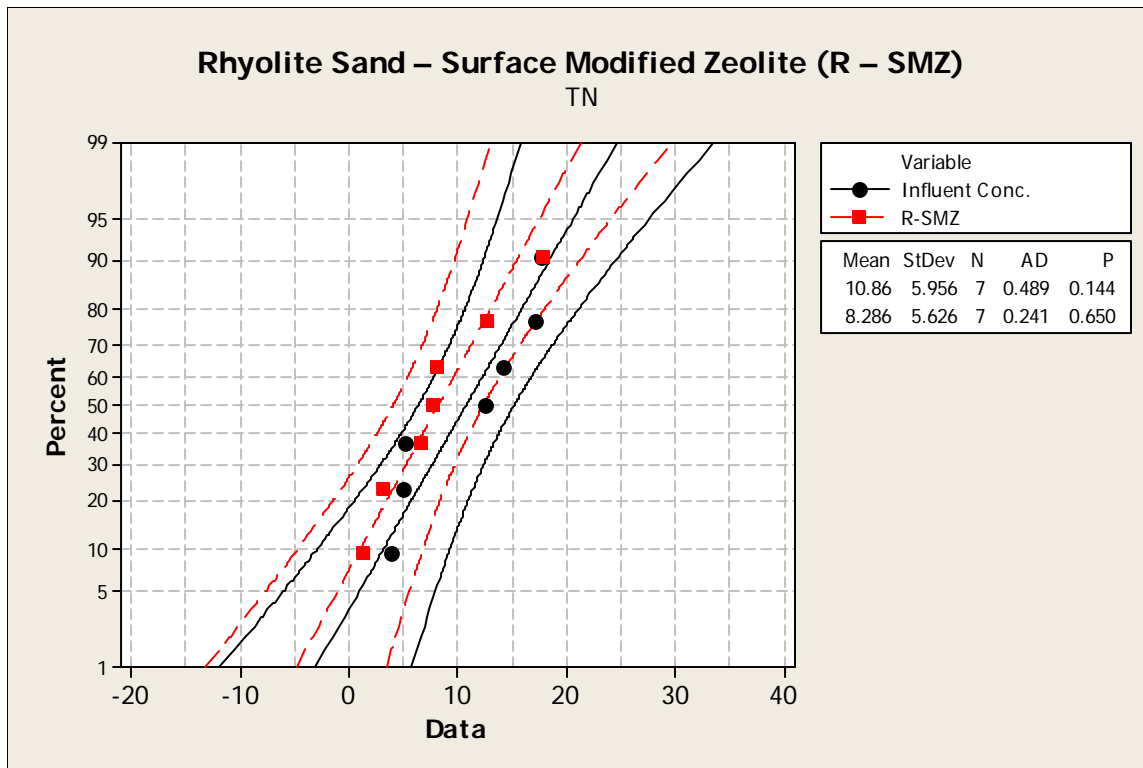


Figure A4-115. Probability plots for total nitrogen and R and SMZ mixed media column.

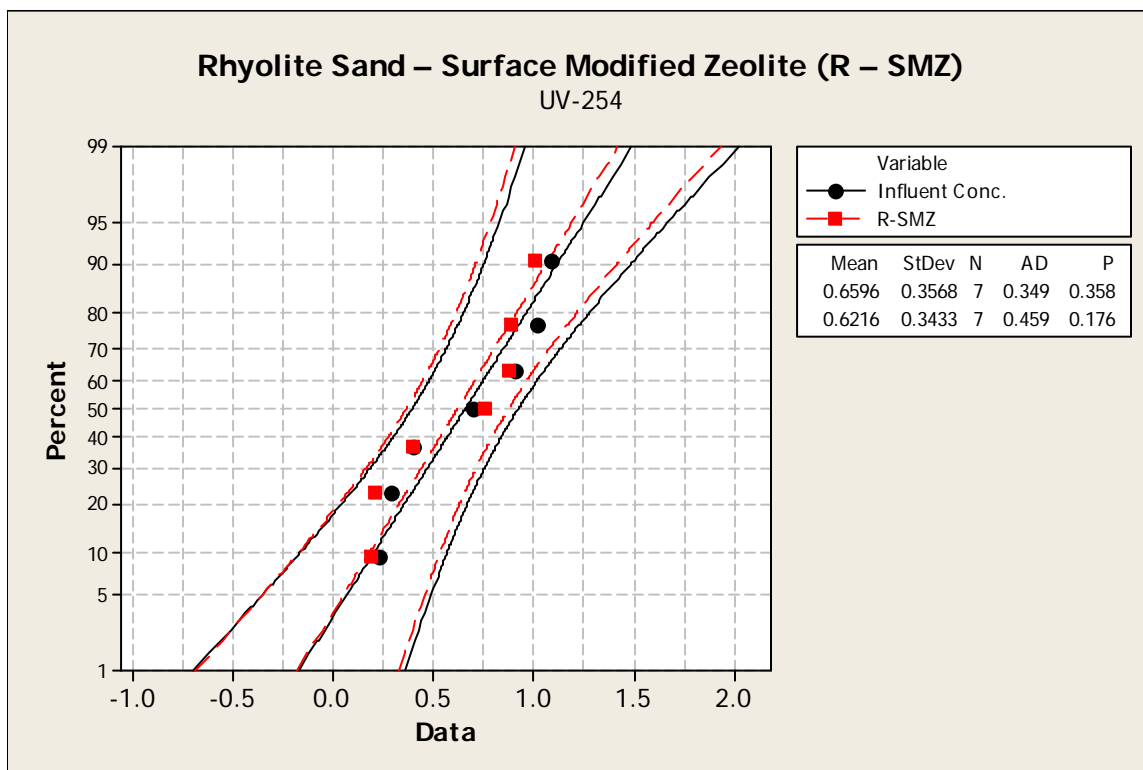


Figure A4-116. Probability plots for UV-254 and R and SMZ mixed media column.

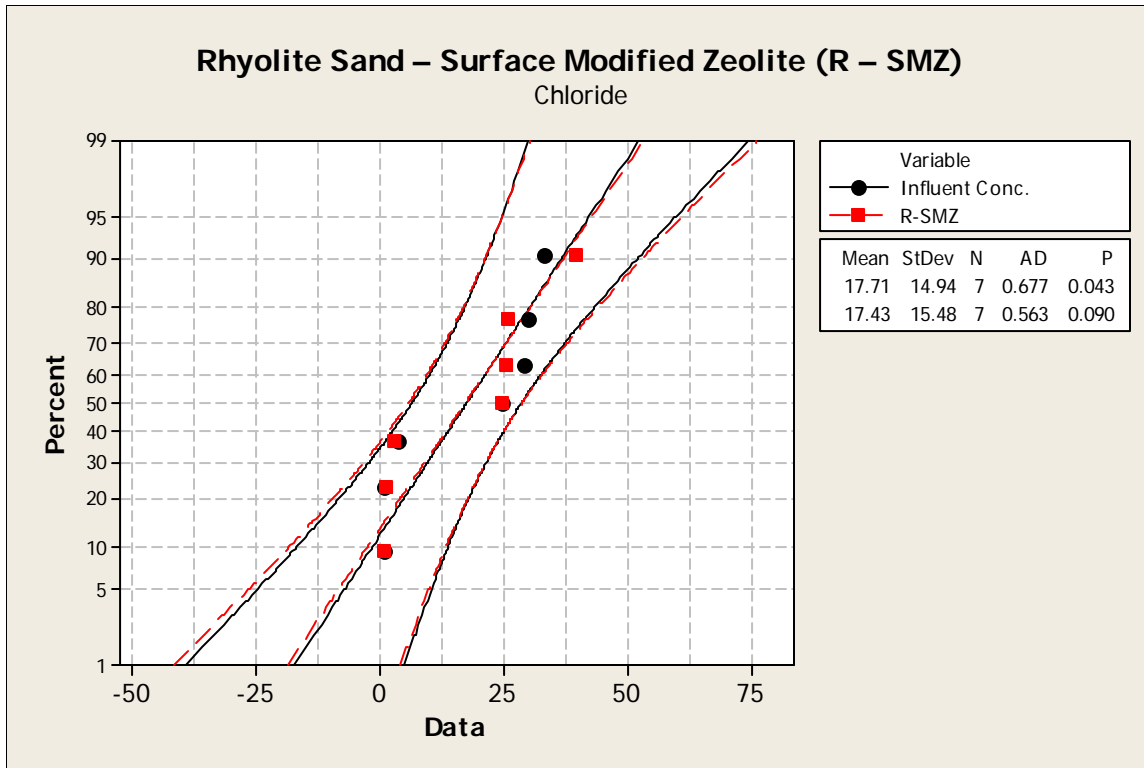


Figure A4-117. Probability plots for chloride and R and SMZ mixed media column.

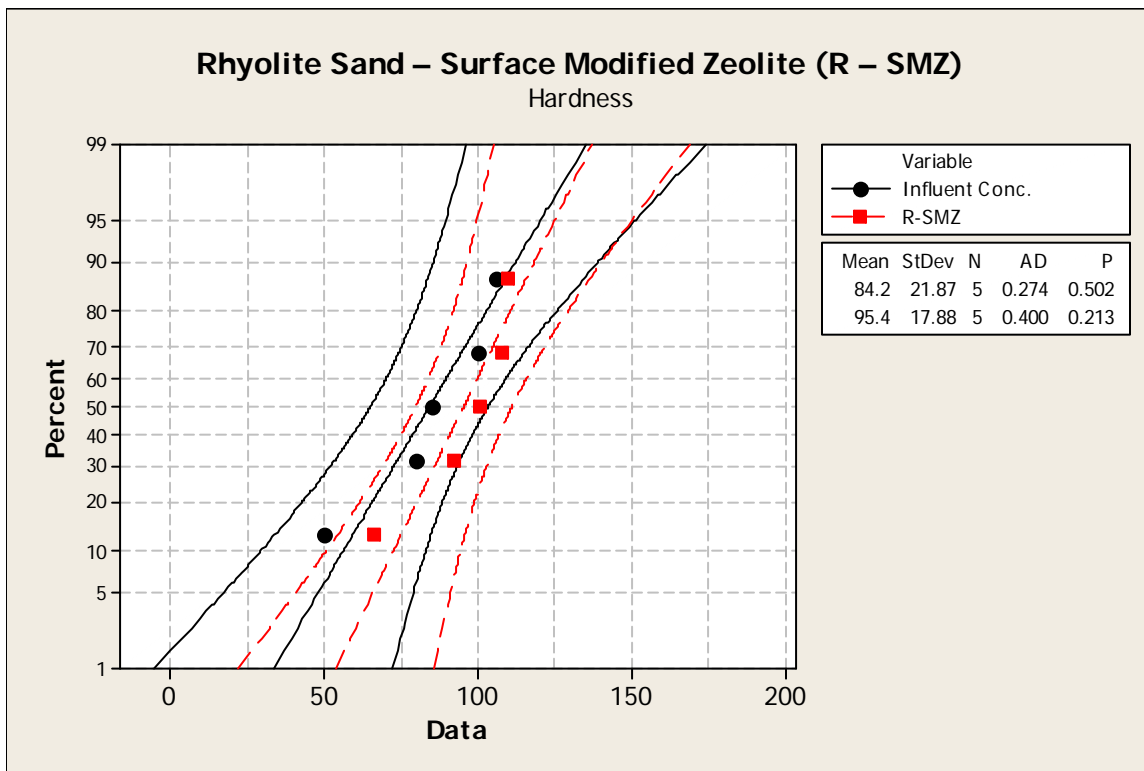


Figure A4-118. Probability plots for hardness and R and SMZ mixed media column.

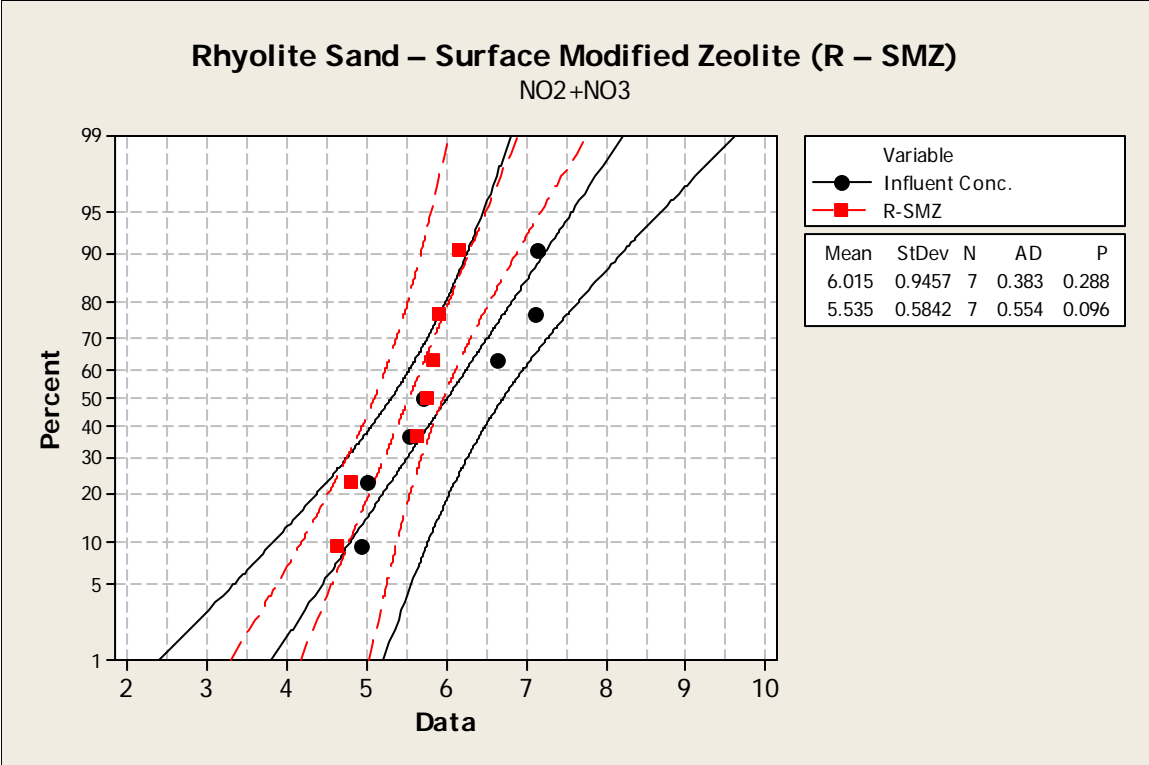


Figure A4-119. Probability plots for nitrite plus nitrate and R and SMZ mixed media column.

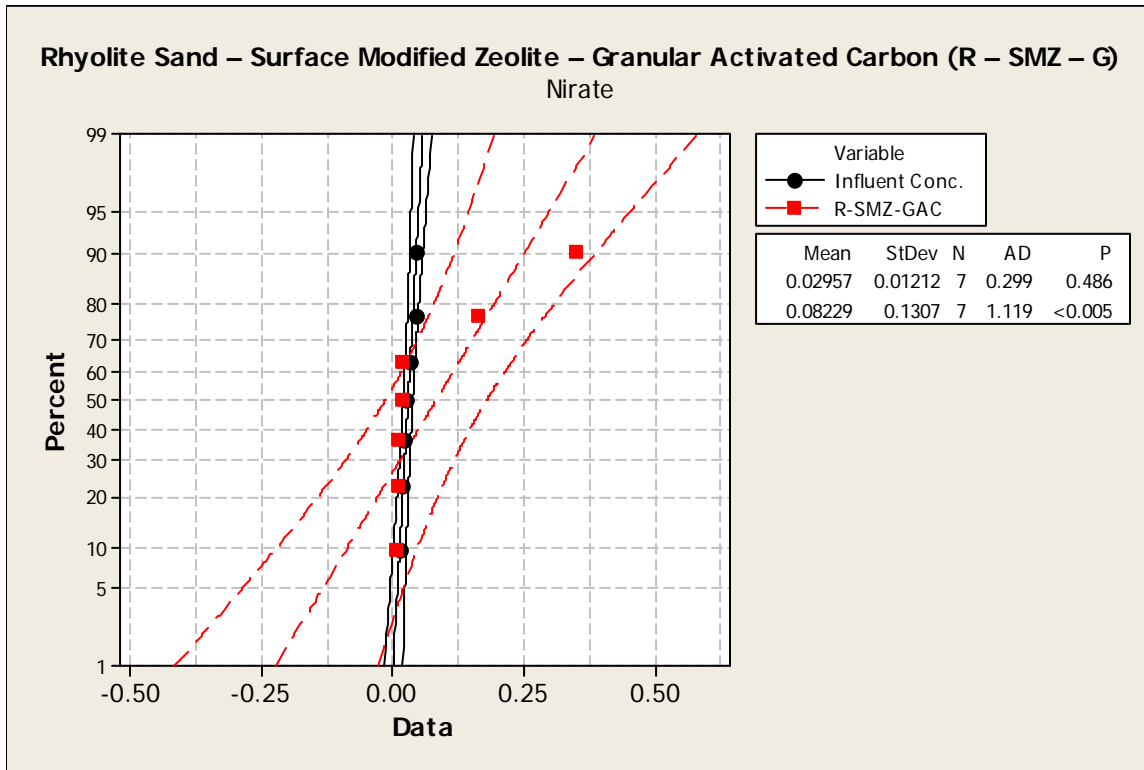


Figure A4-120. Probability plots for nitrite and R-SMZ-GAC mixed media column.

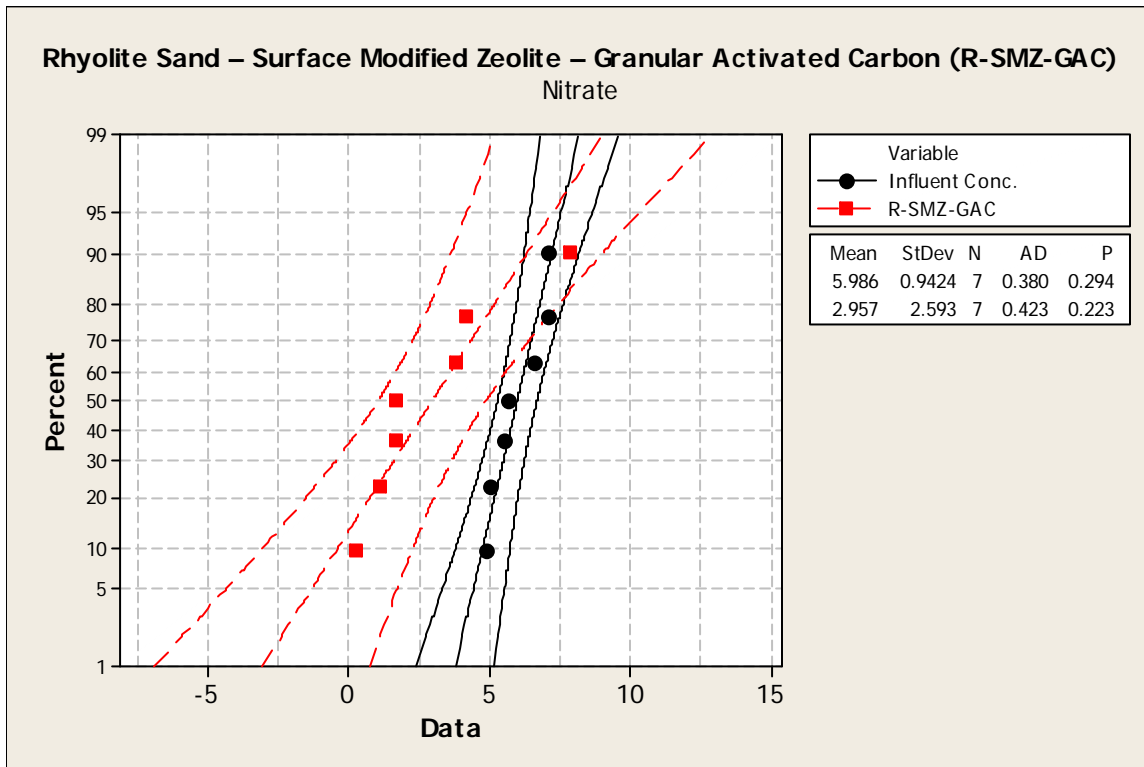


Figure A4-121. Probability plots for nitrate and R-SMZ-GAC mixed media column.

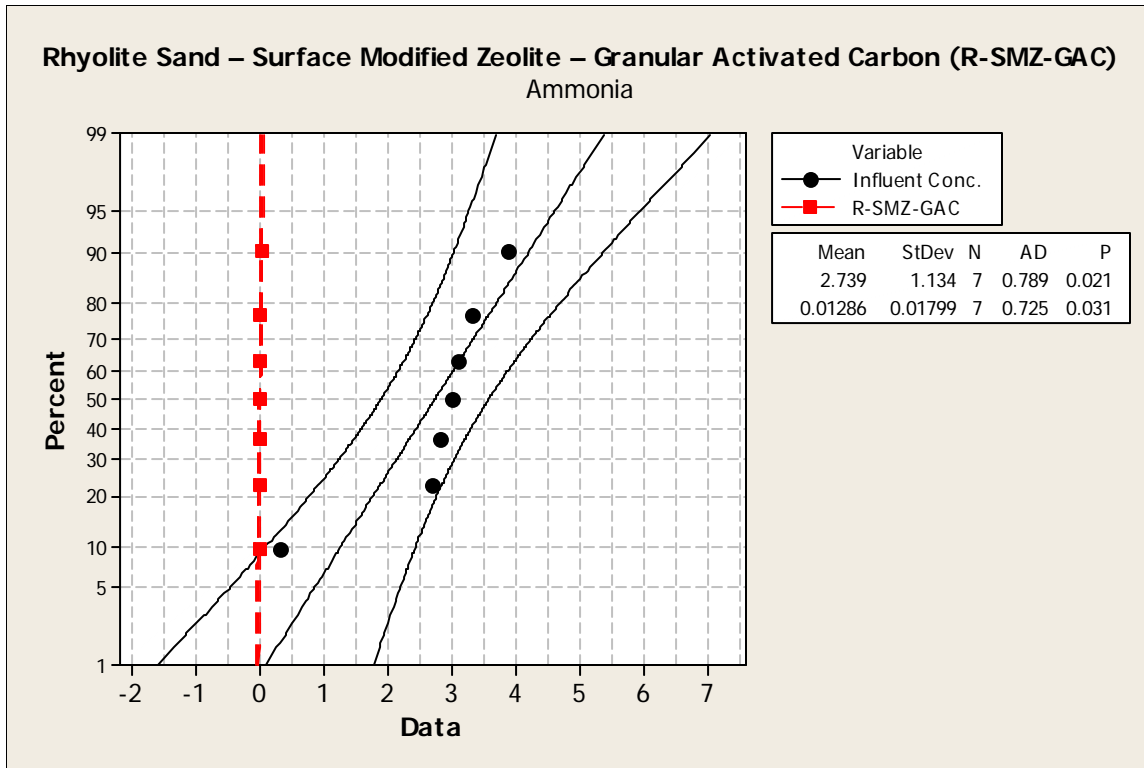


Figure A4-122. Probability plots for ammonia and R-SMZ-GAC mixed media column.

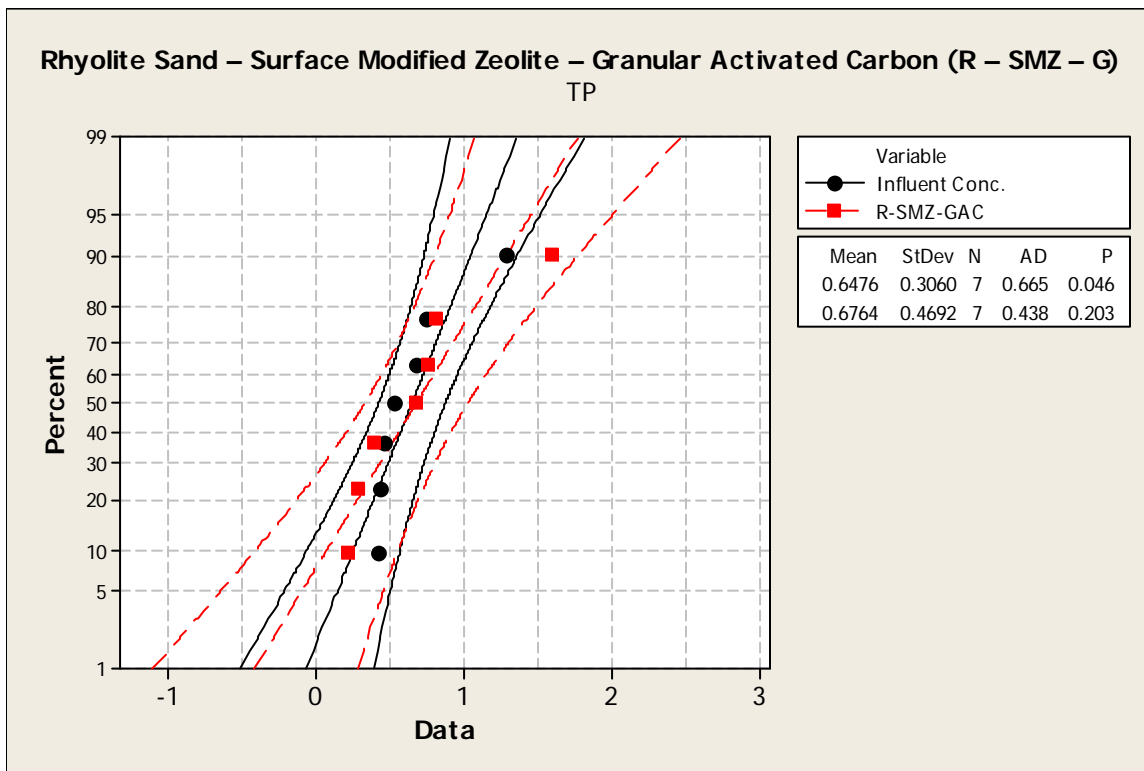


Figure A4-123. Probability plots for total phosphorus and R-SMZ-GAC mixed media column.

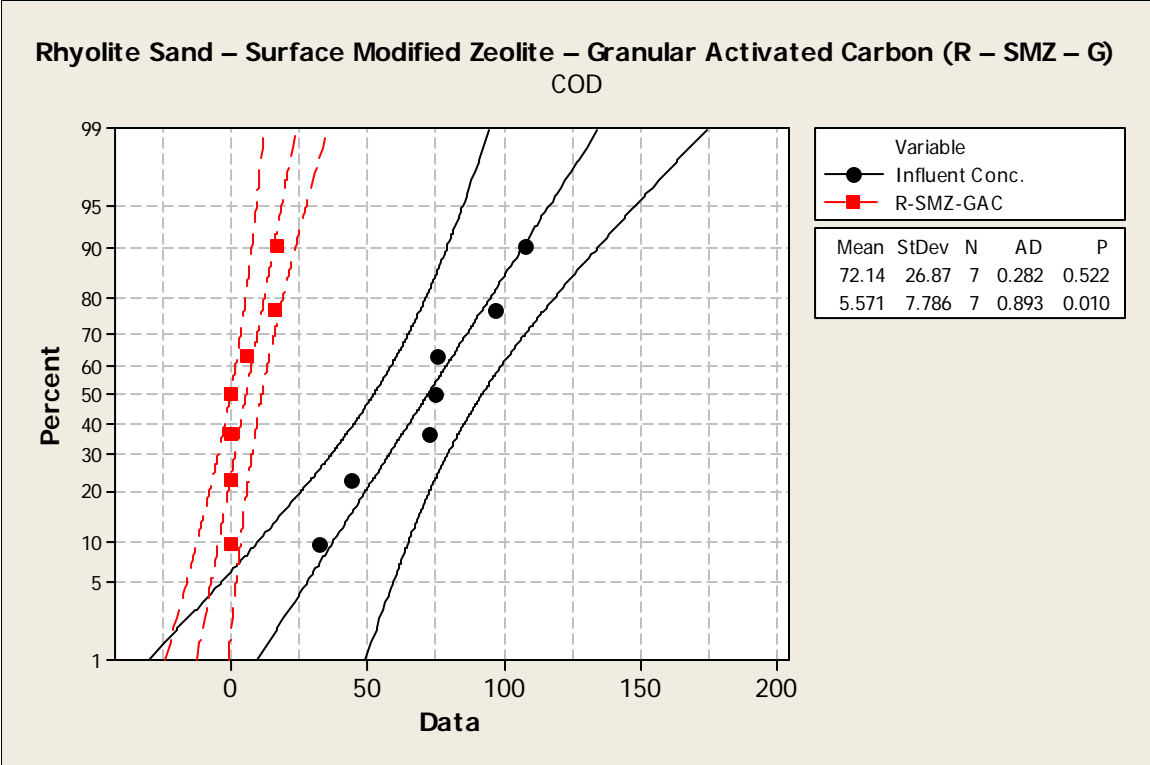


Figure A4-124. Probability plots for COD and R-SMZ-GAC mixed media column.

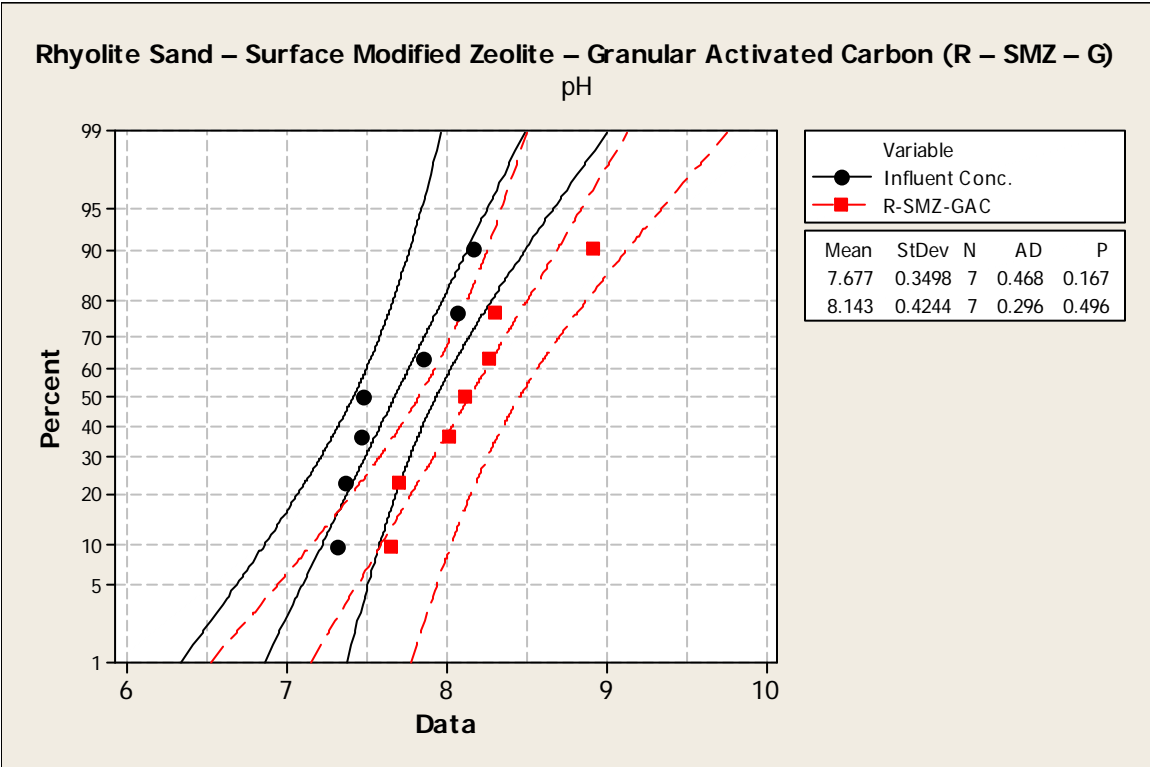


Figure A4-125. Probability plots for pH and R-SMZ-GAC mixed media column.

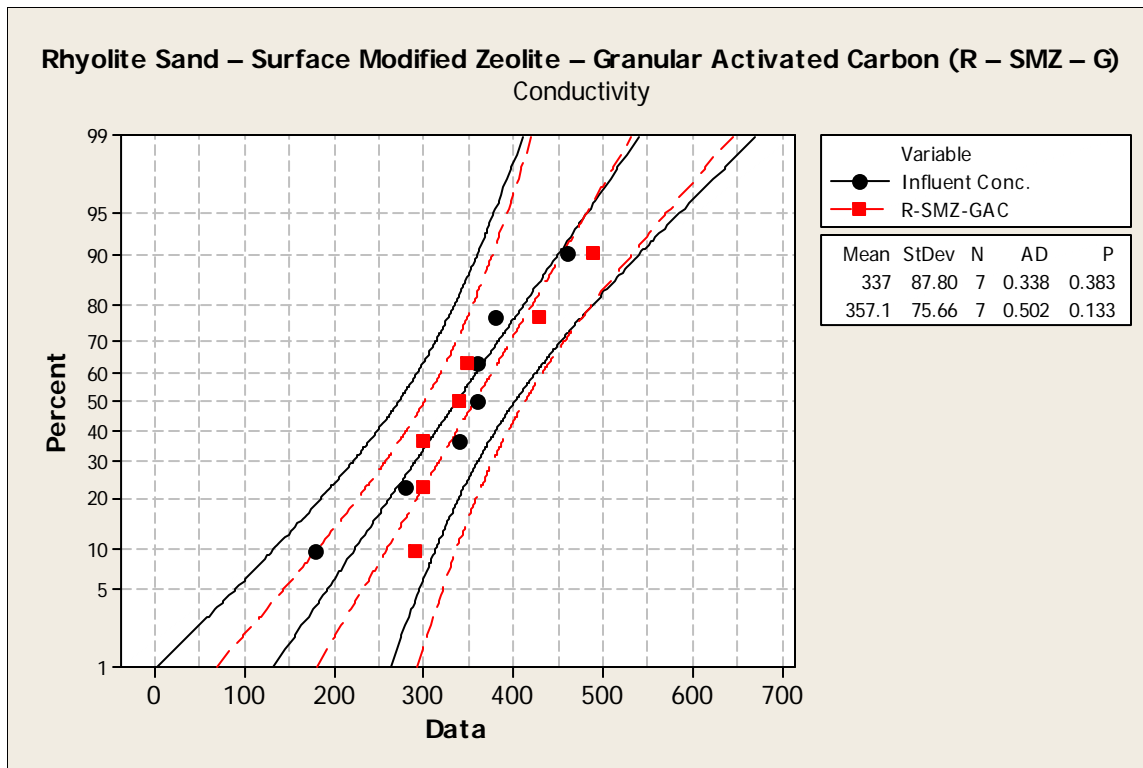


Figure A4-126. Probability plots for conductivity and R-SMZ-GAC mixed media column.

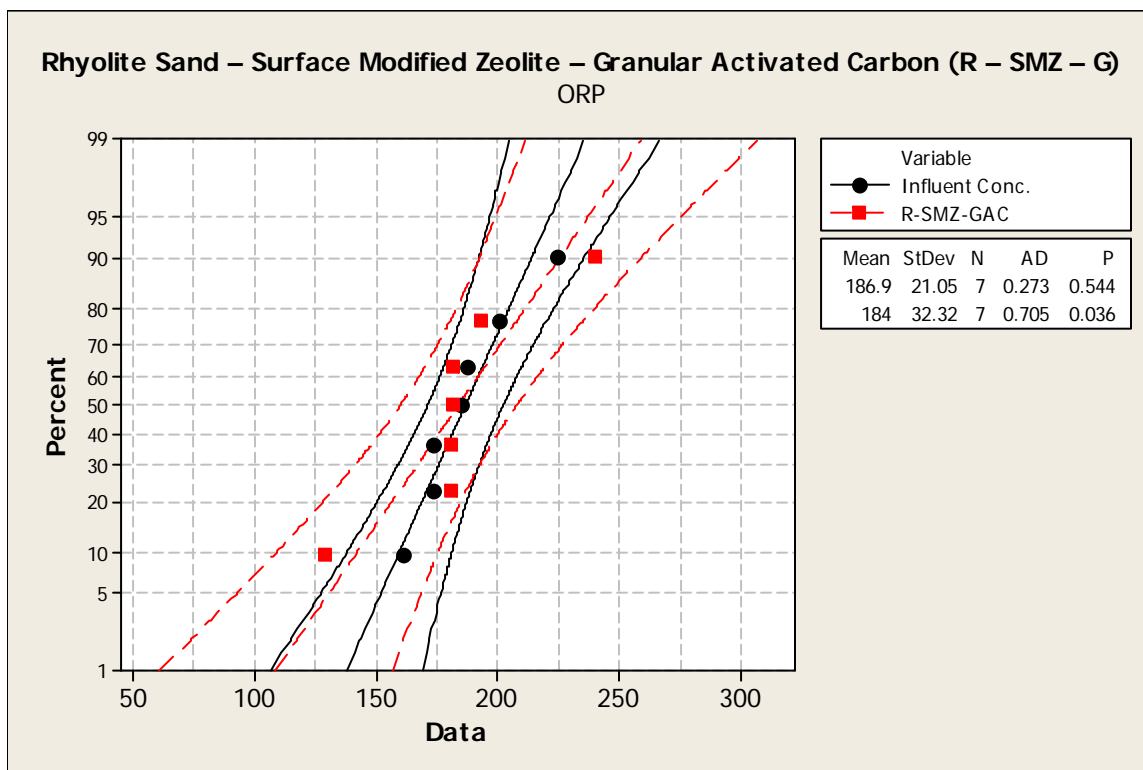


Figure A4-127. Probability plots for ORP and R-SMZ-GAC mixed media column.

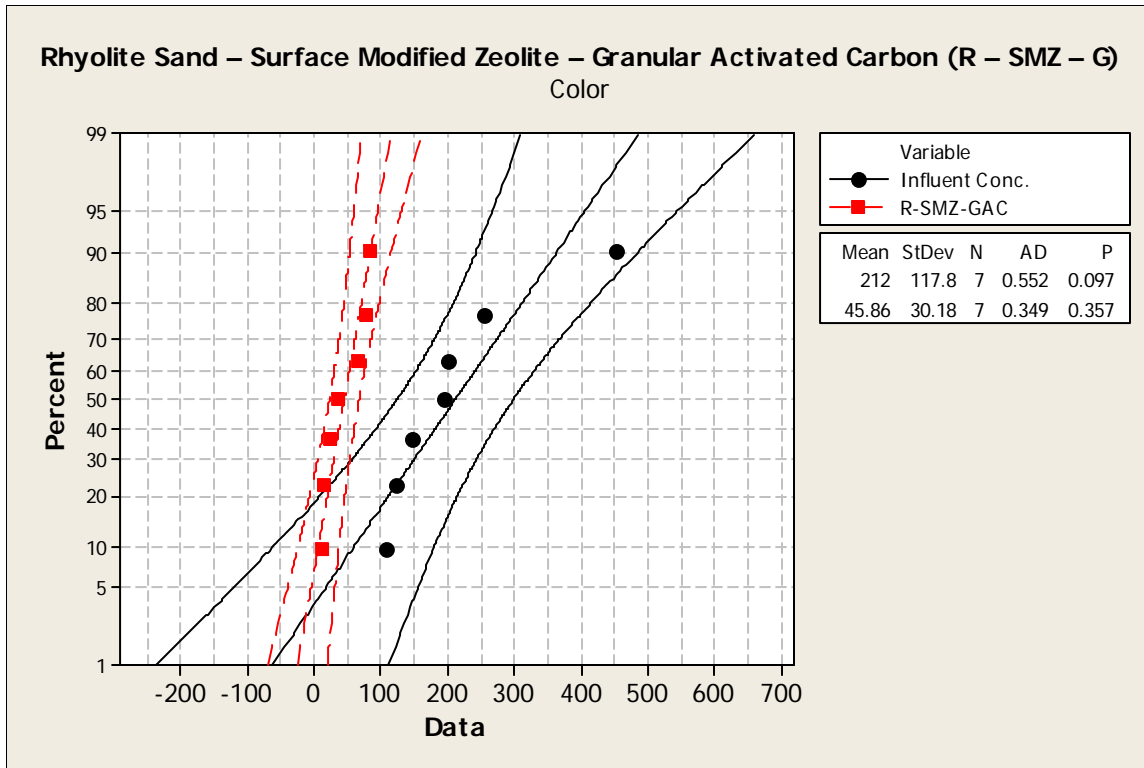


Figure A4-128. Probability plots for color and R-SMZ-GAC mixed media column.

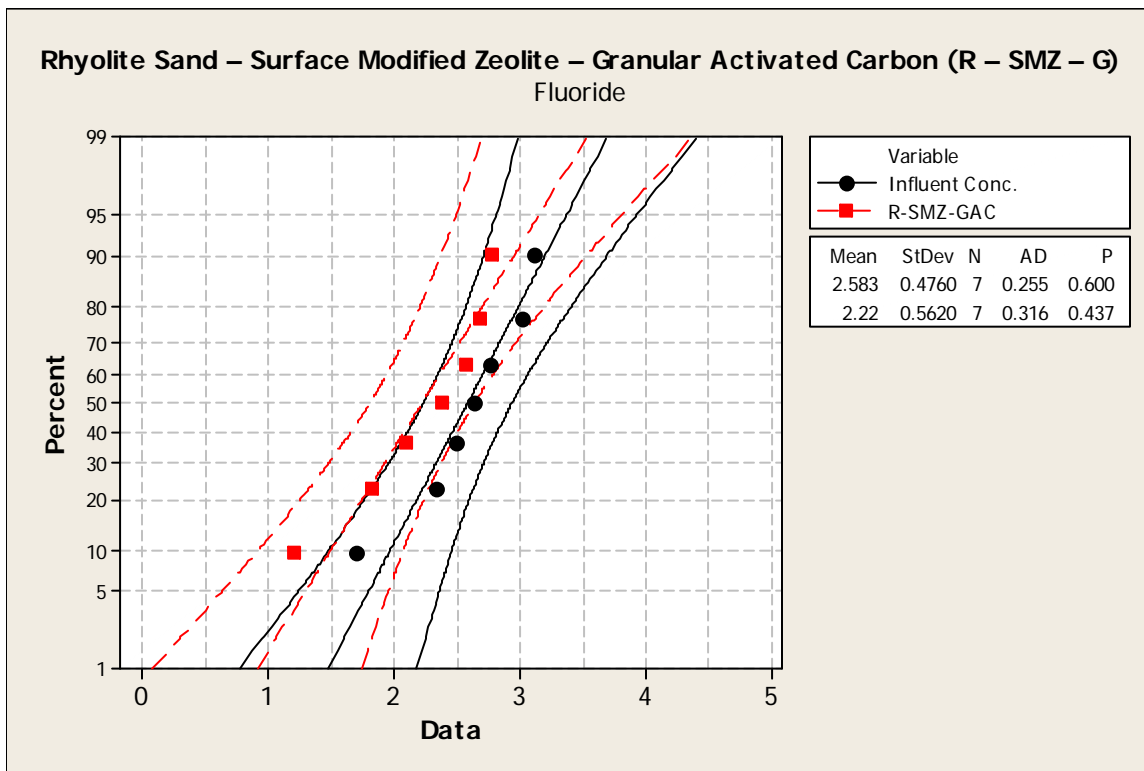


Figure A4-129. Probability plots for fluoride and R-SMZ-GAC mixed media column.

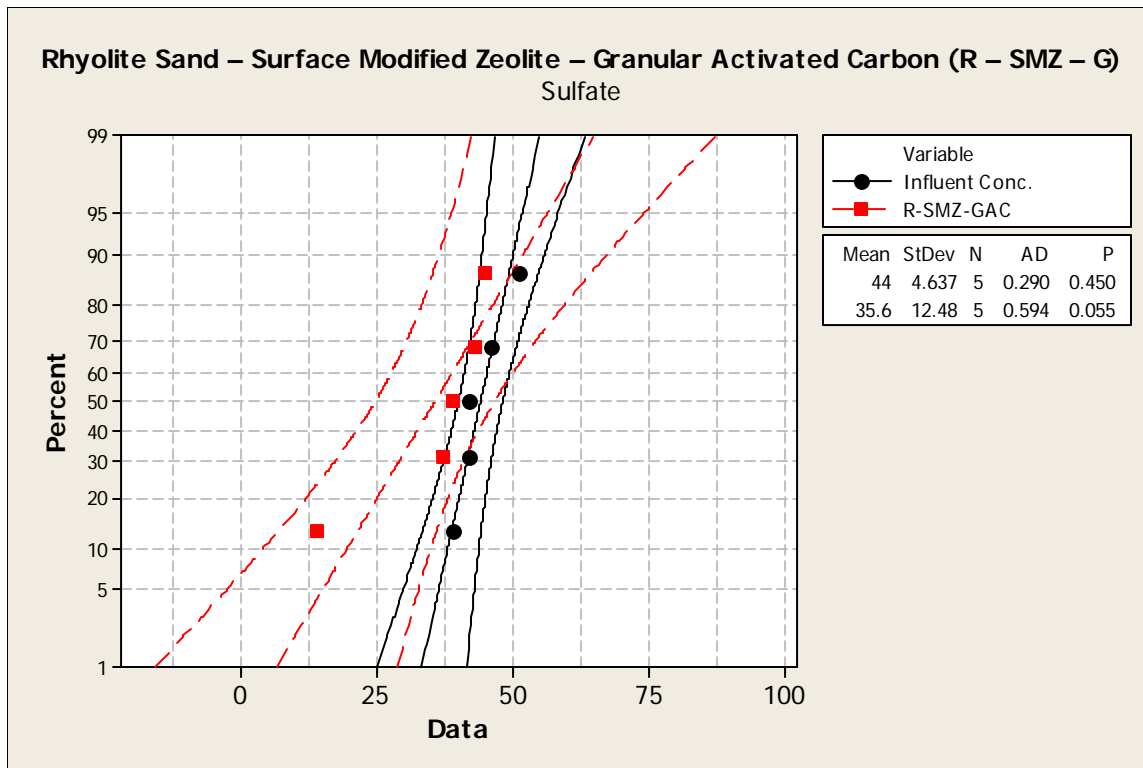


Figure A4-130. Probability plots for sulfate and R-SMZ-GAC mixed media column.

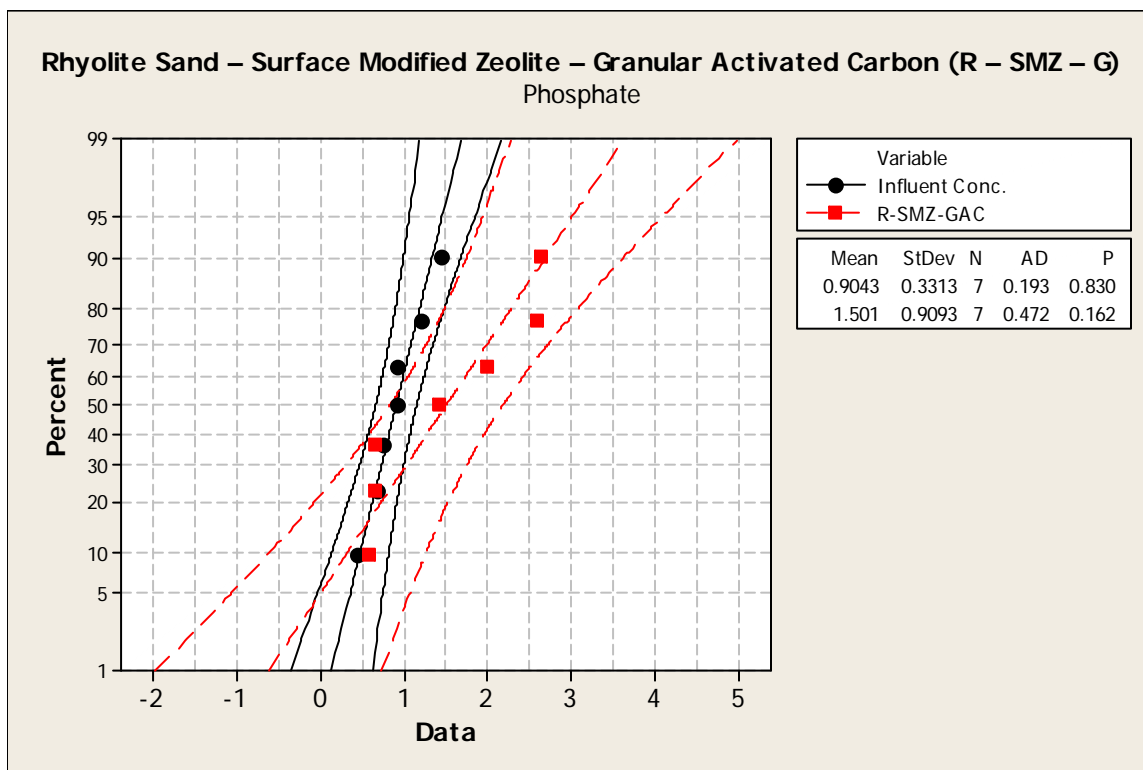


Figure A4-131. Probability plots for phosphate and R-SMZ-GAC mixed media column.

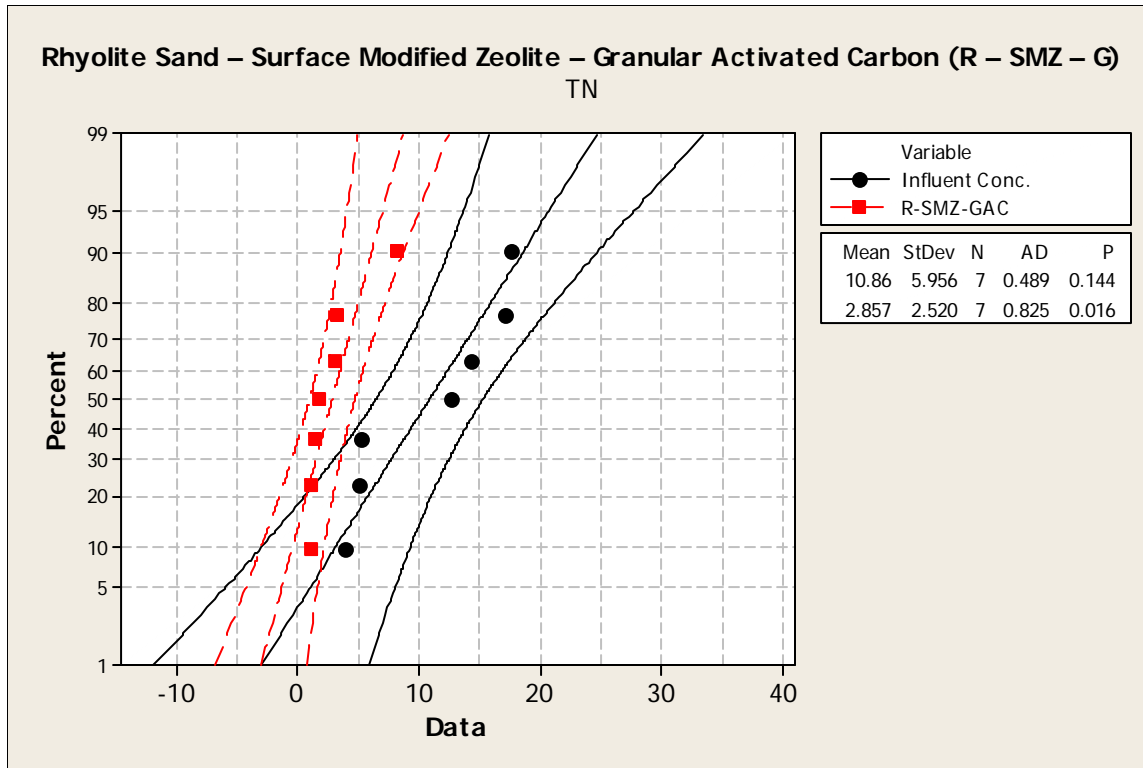


Figure A4-132. Probability plots for total nitrogen and R-SMZ-GAC mixed media column.

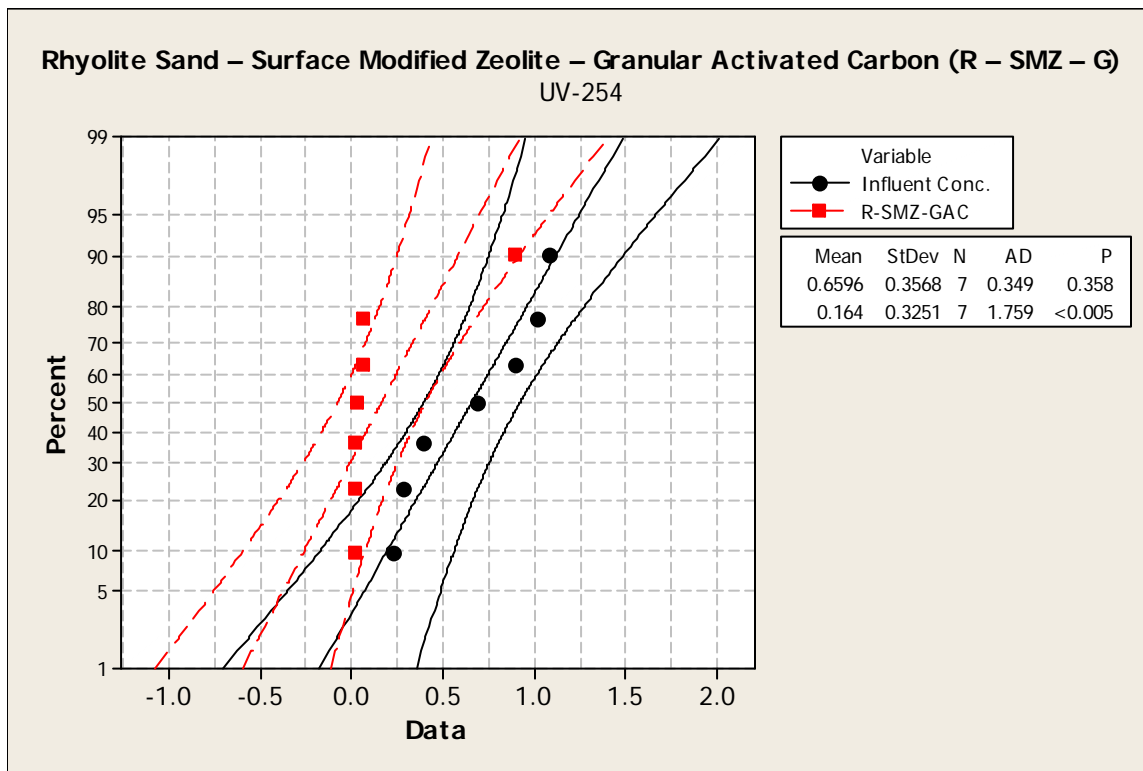


Figure A4-133. Probability plots for UV-254 and R-SMZ-GAC mixed media column.

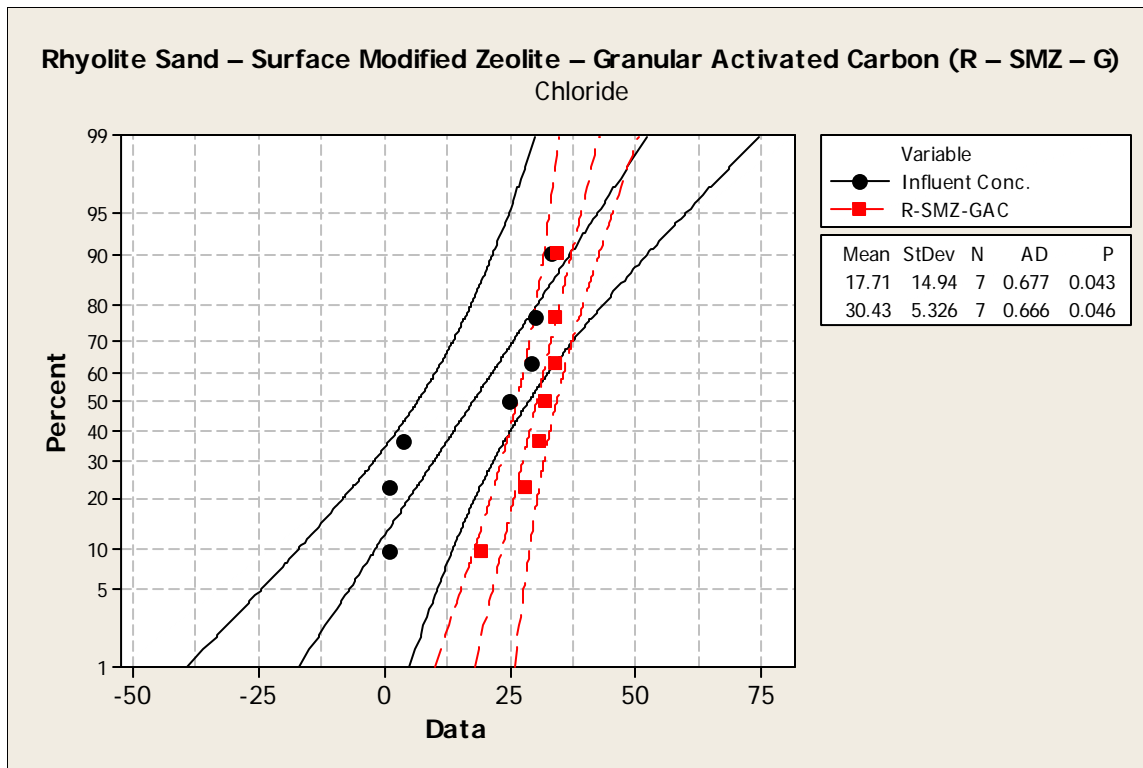


Figure A4-134. Probability plots for chloride and R-SMZ-GAC mixed media column.

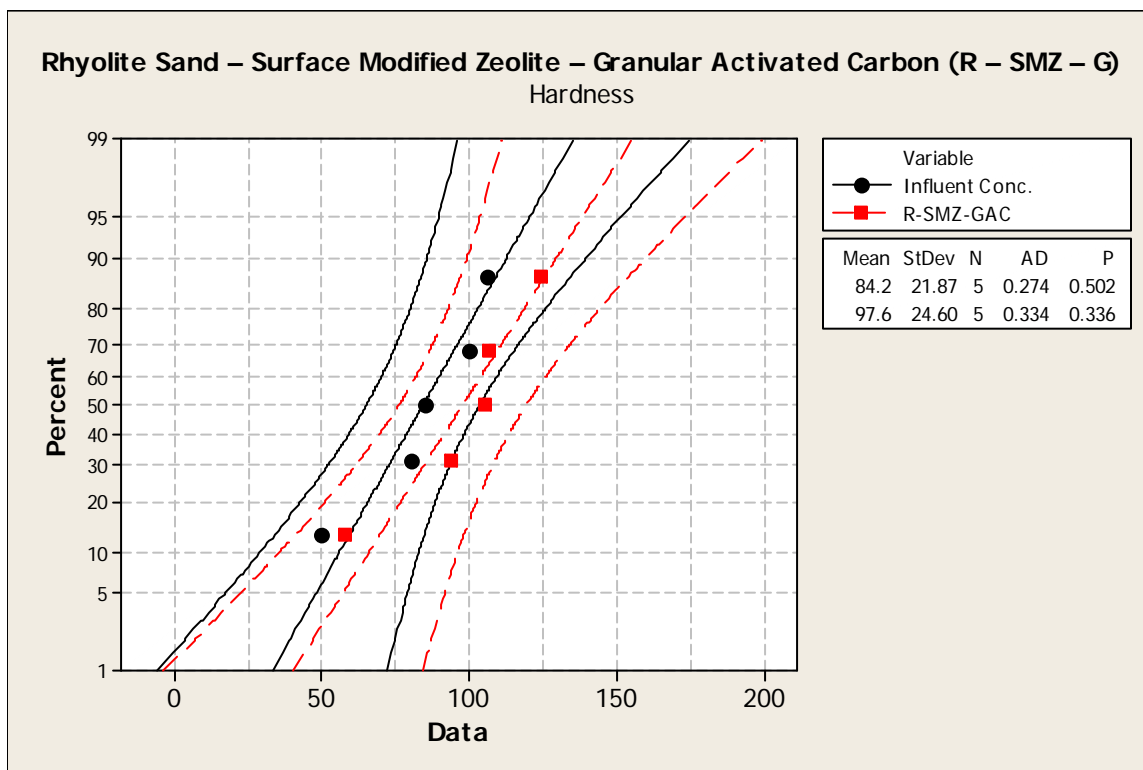


Figure A4-135. Probability plots for hardness and R-SMZ-GAC mixed media column.

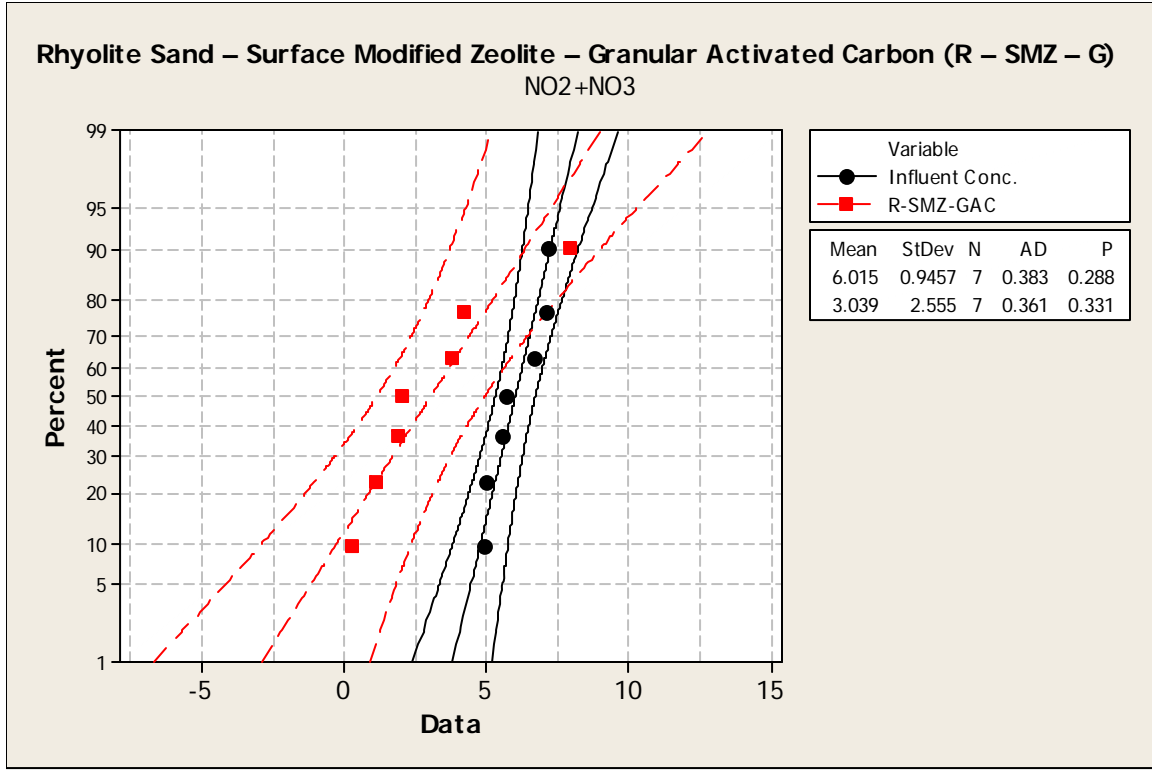


Figure A4-136. Probability plots for nitrite plus nitrate and R-SMZ-GAC mixed media column.

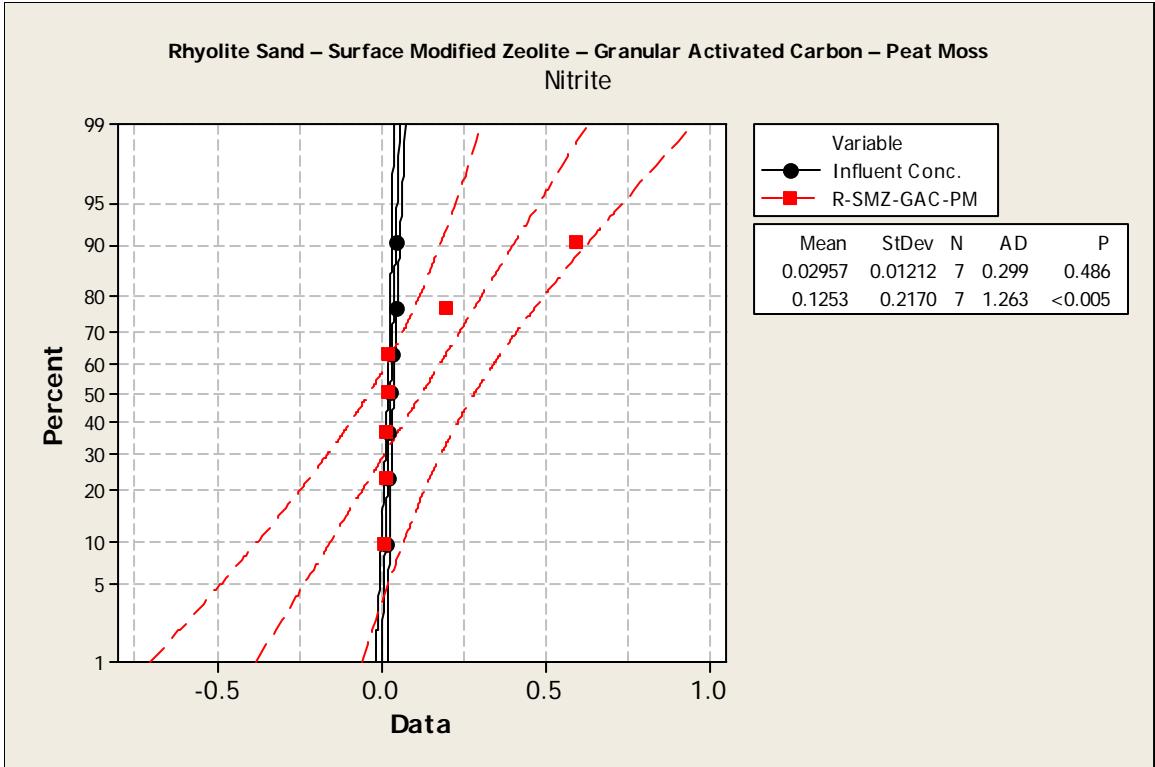


Figure A4-137. Probability plots for nitrite and R-SMZ-GAC-PM mixed media column.

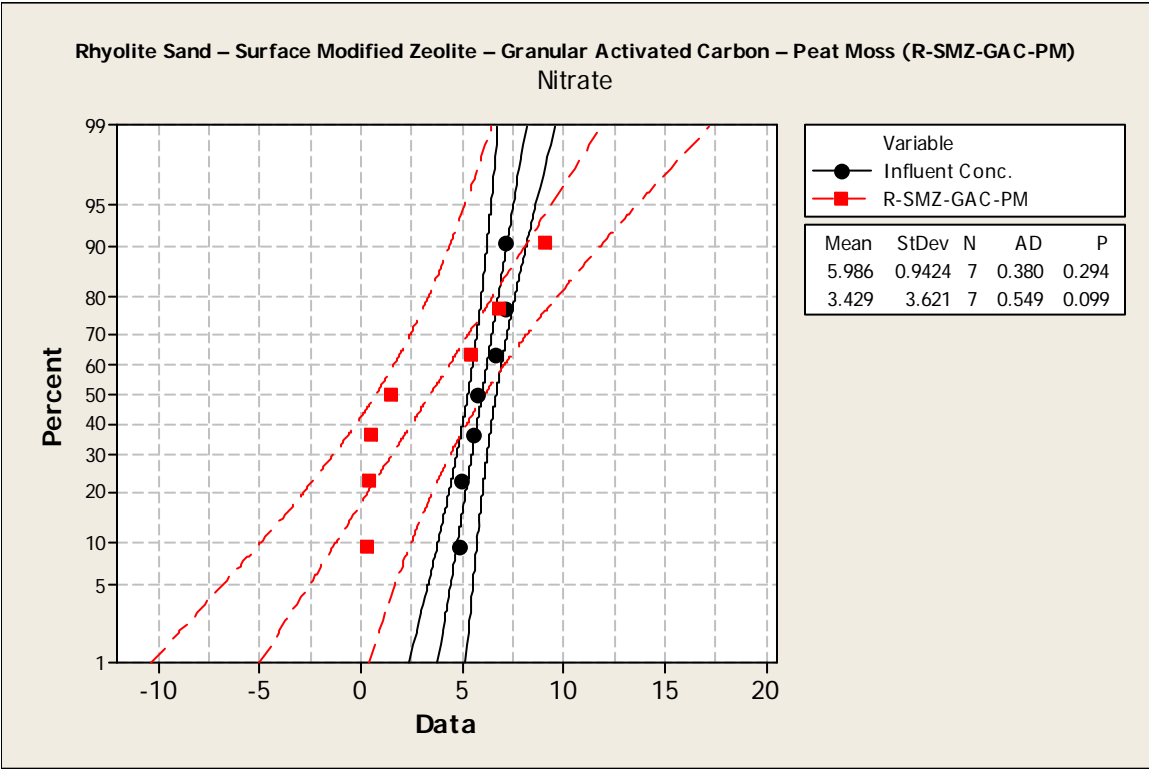


Figure A4-138. Probability plots for nitrate and R-SMZ-GAC-PM mixed media column.

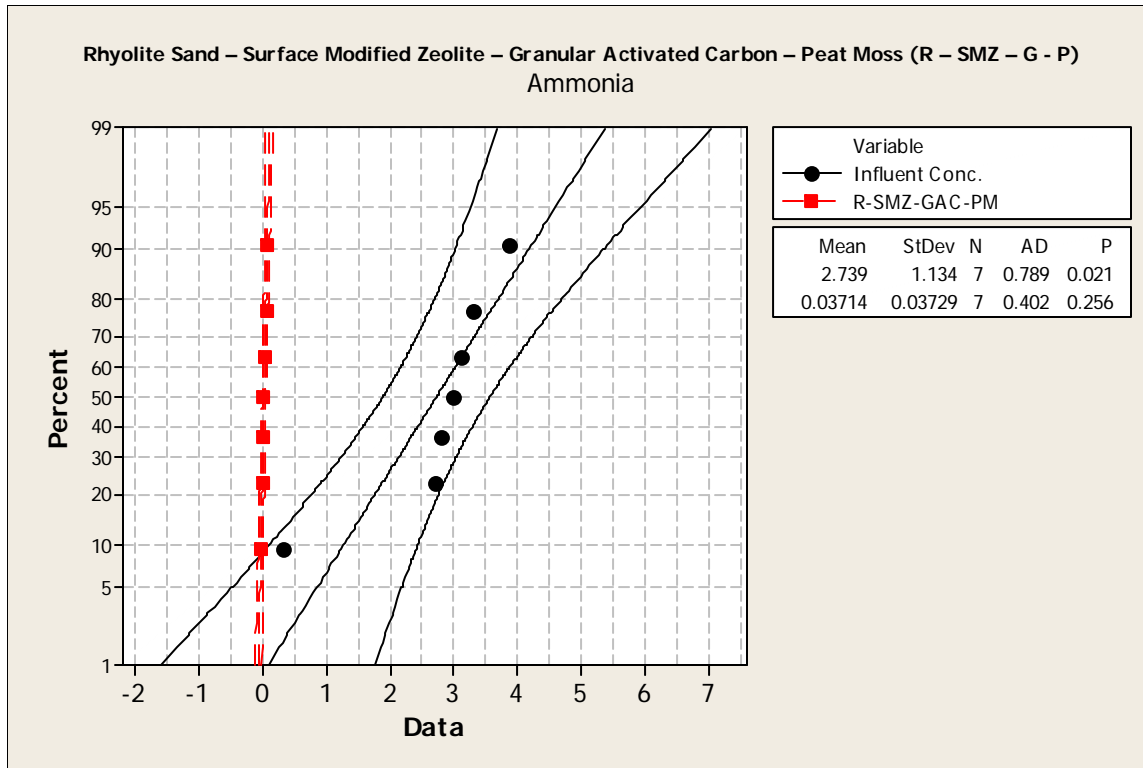


Figure A4-139. Probability plots for ammonia and R-SMZ-GAC-PM mixed media column.

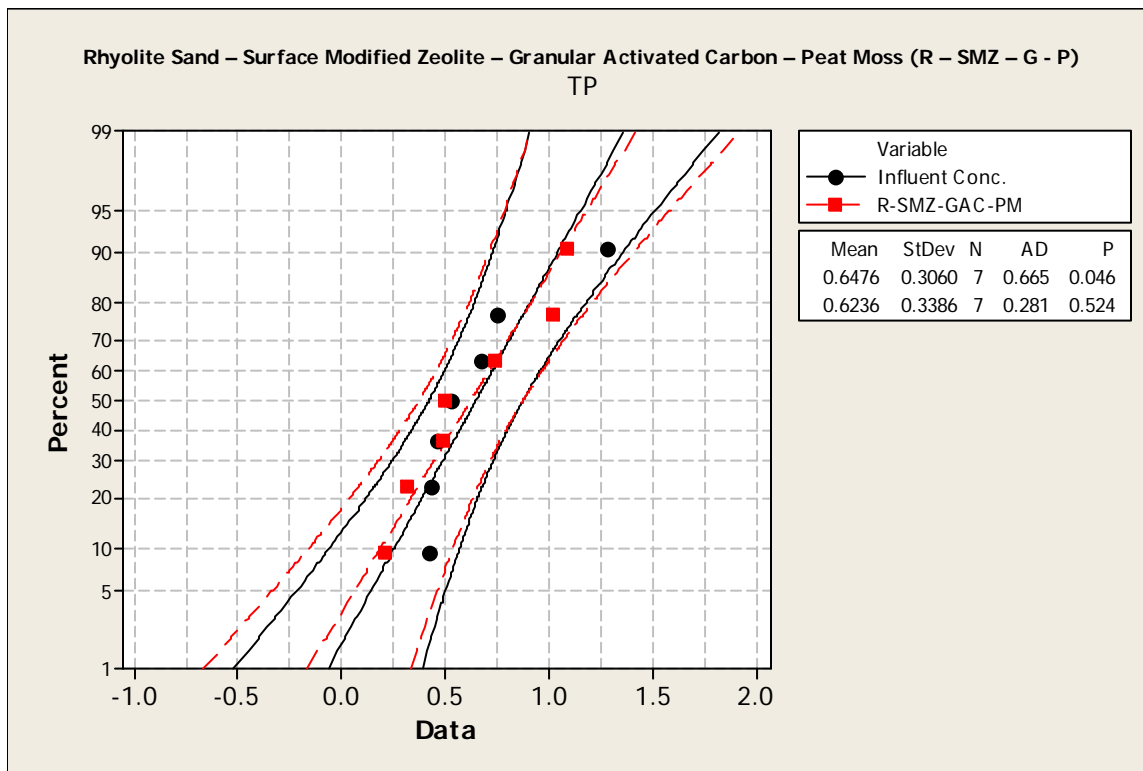


Figure A4-140. Probability plots for total phosphate and R-SMZ-GAC-PM mixed media column.

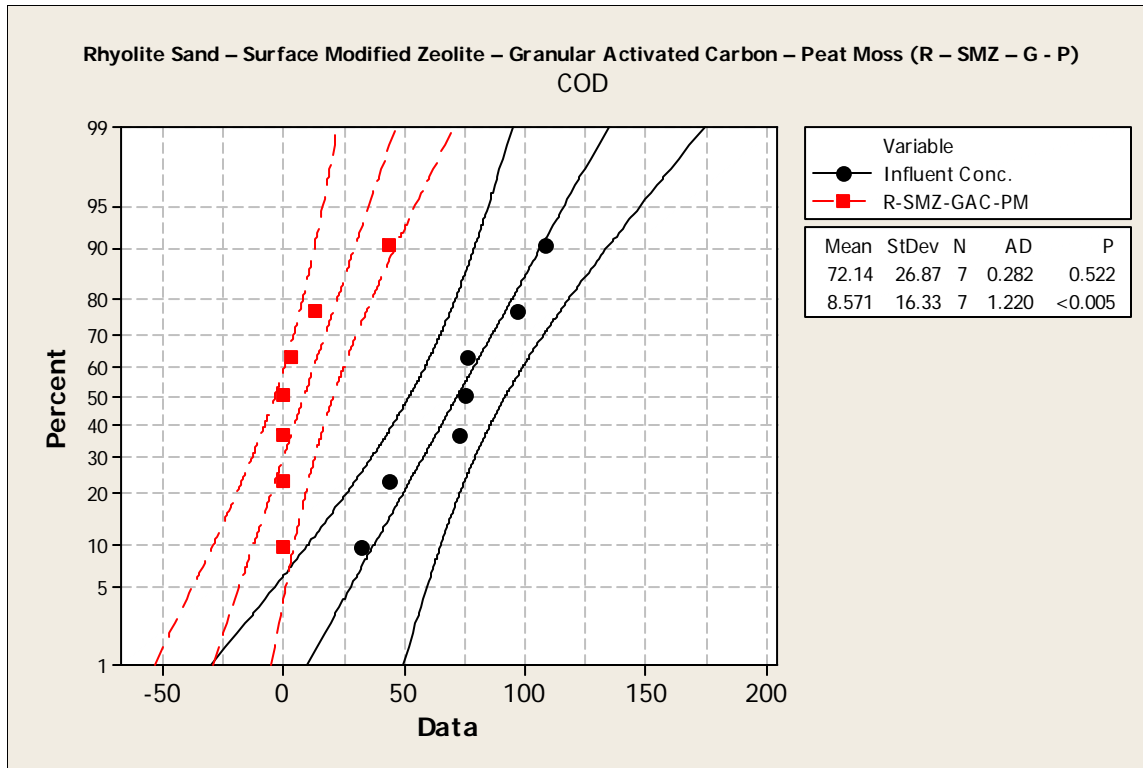


Figure A4-141. Probability plots for COD and R-SMZ-GAC-PM mixed media column.

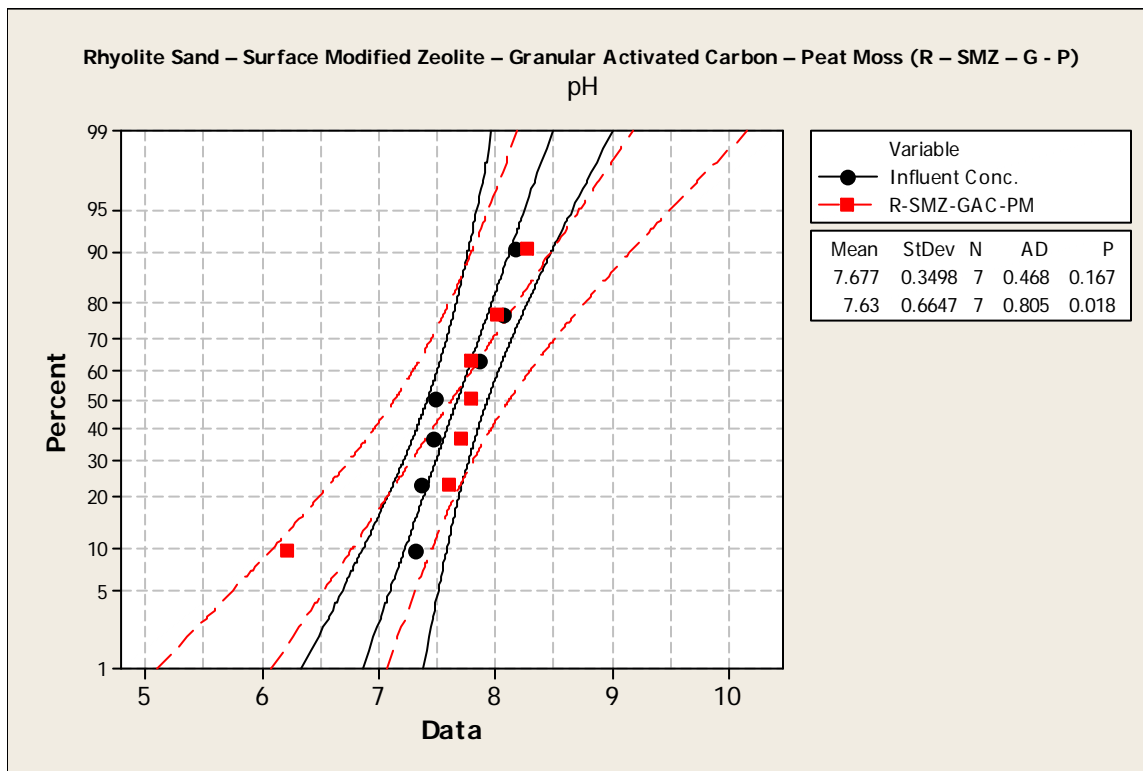


Figure A4-142. Probability plots for pH and R-SMZ-GAC-PM mixed media column.

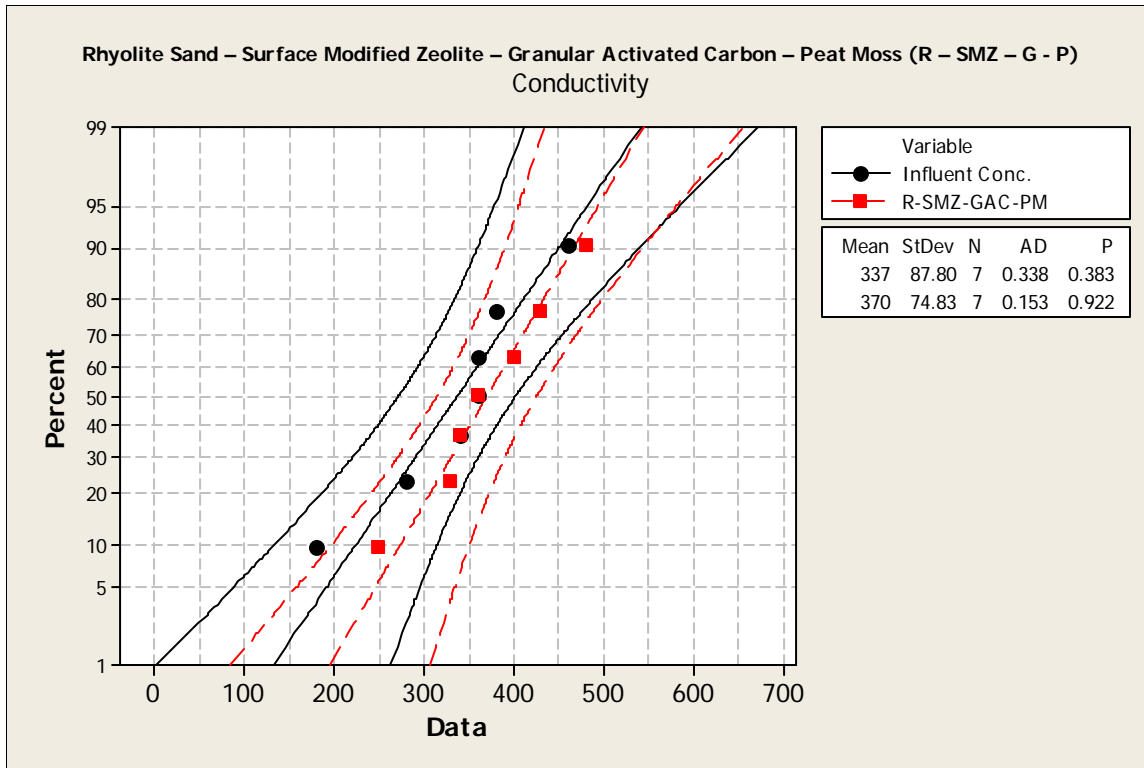


Figure A4-143. Probability plots for conductivity and R-SMZ-GAC-PM mixed media column.

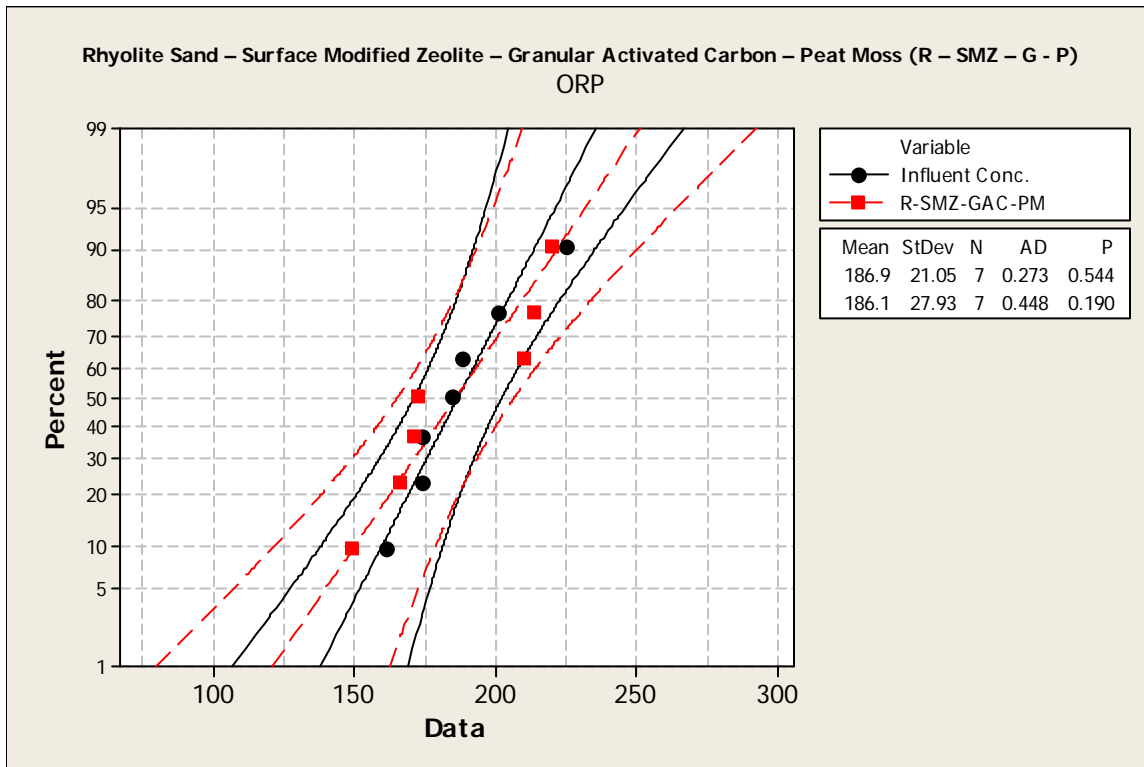


Figure A4-144. Probability plots for ORP and R-SMZ-GAC-PM mixed media column.

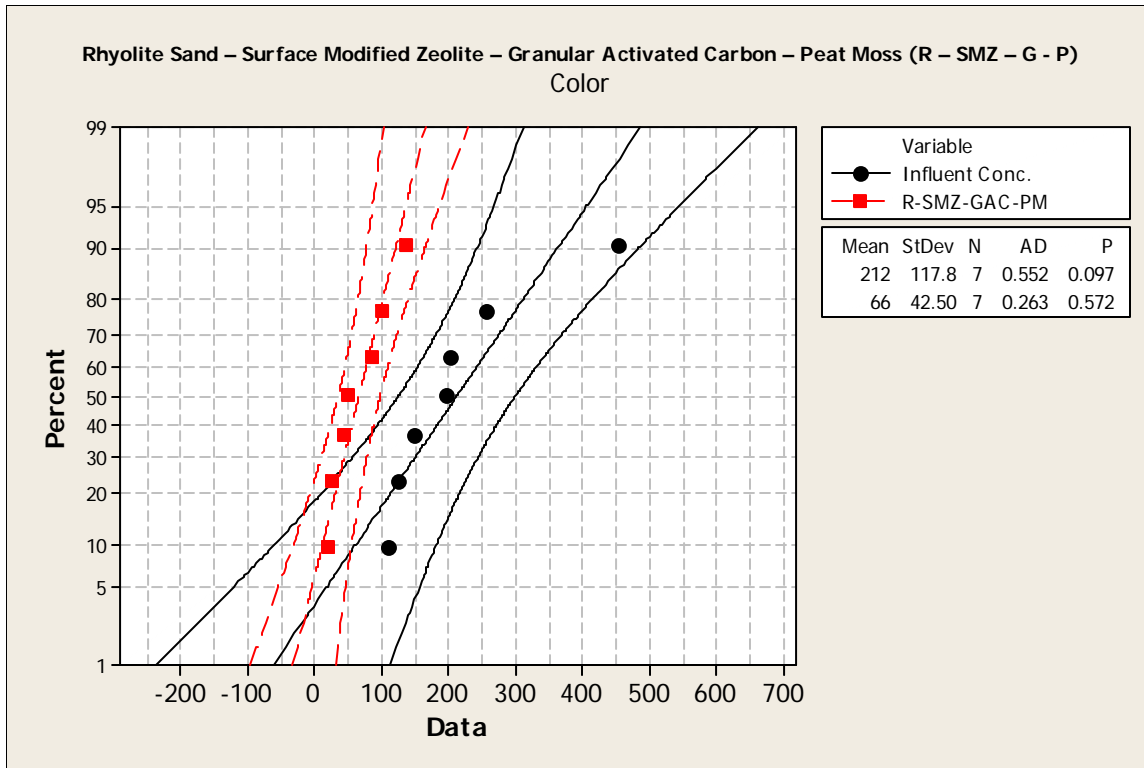


Figure A4-145. Probability plots for color and R-SMZ-GAC-PM mixed media column.

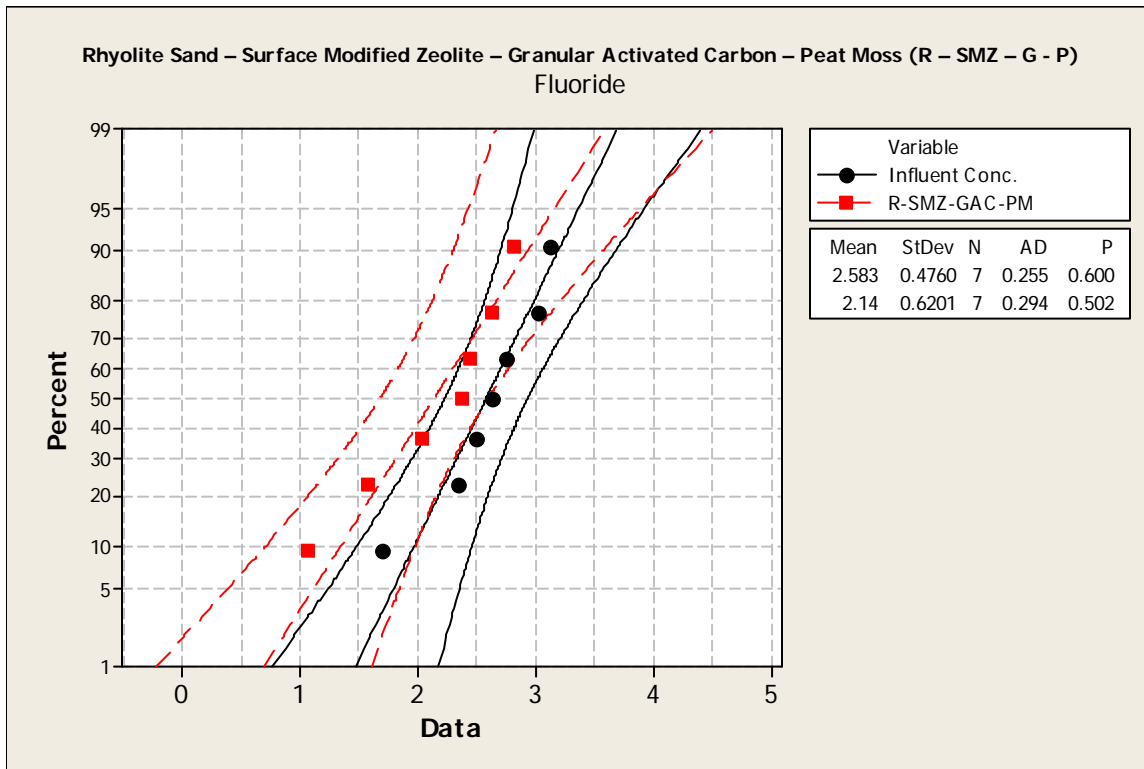


Figure A4-146. Probability plots for fluoride and R-SMZ-GAC-PM mixed media column.

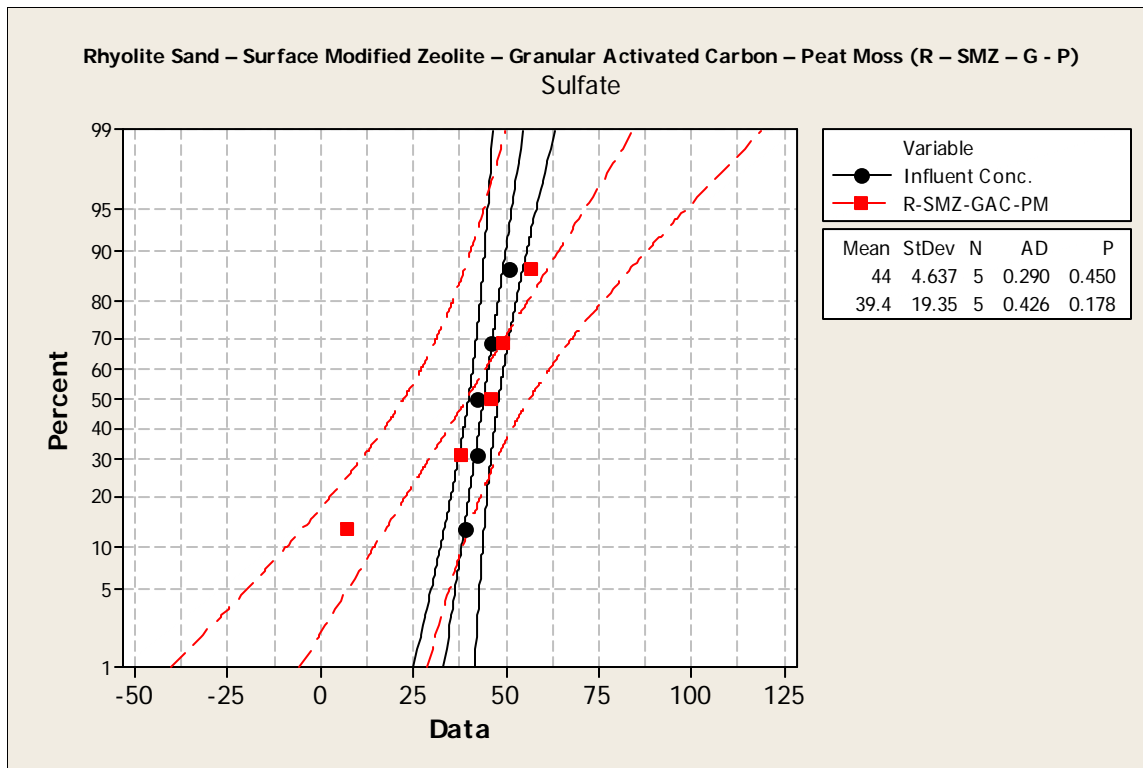


Figure A4-147. Probability plots for sulfate and R-SMZ-GAC-PM mixed media column.

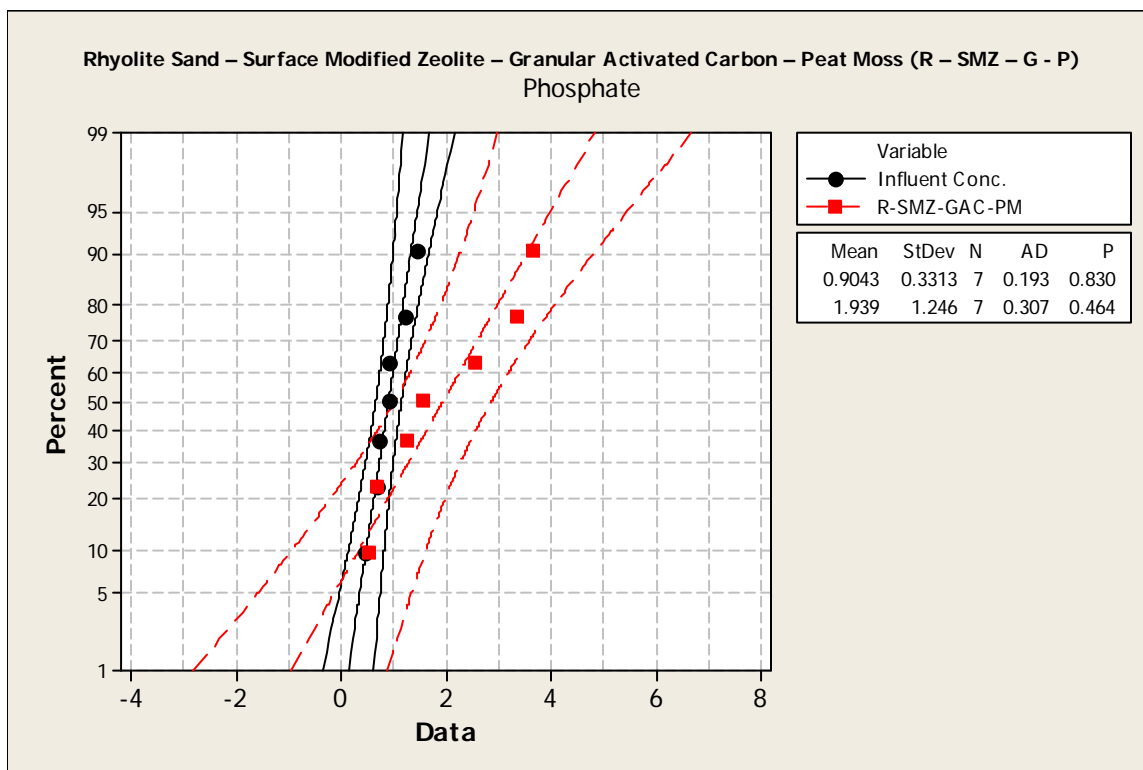


Figure A4-148. Probability plots for phosphate and R-SMZ-GAC-PM mixed media column.

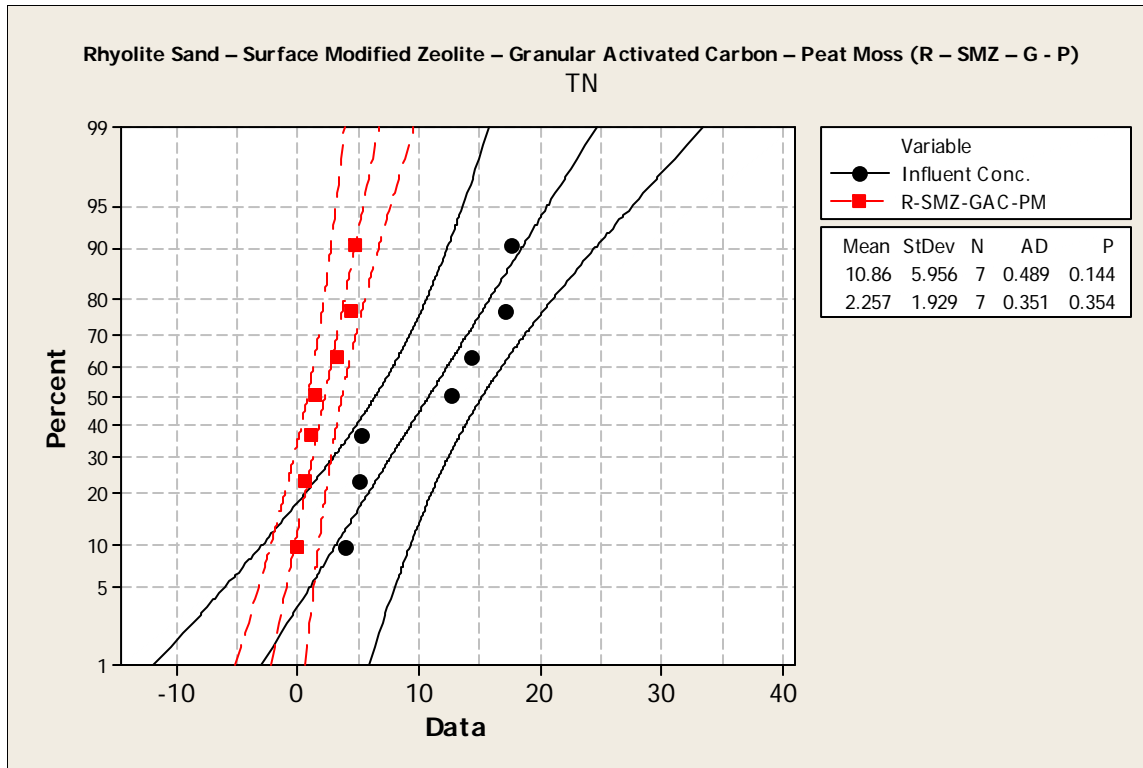


Figure A4-149. Probability plots for total nitrogen and R-SMZ-GAC-PM mixed media column.

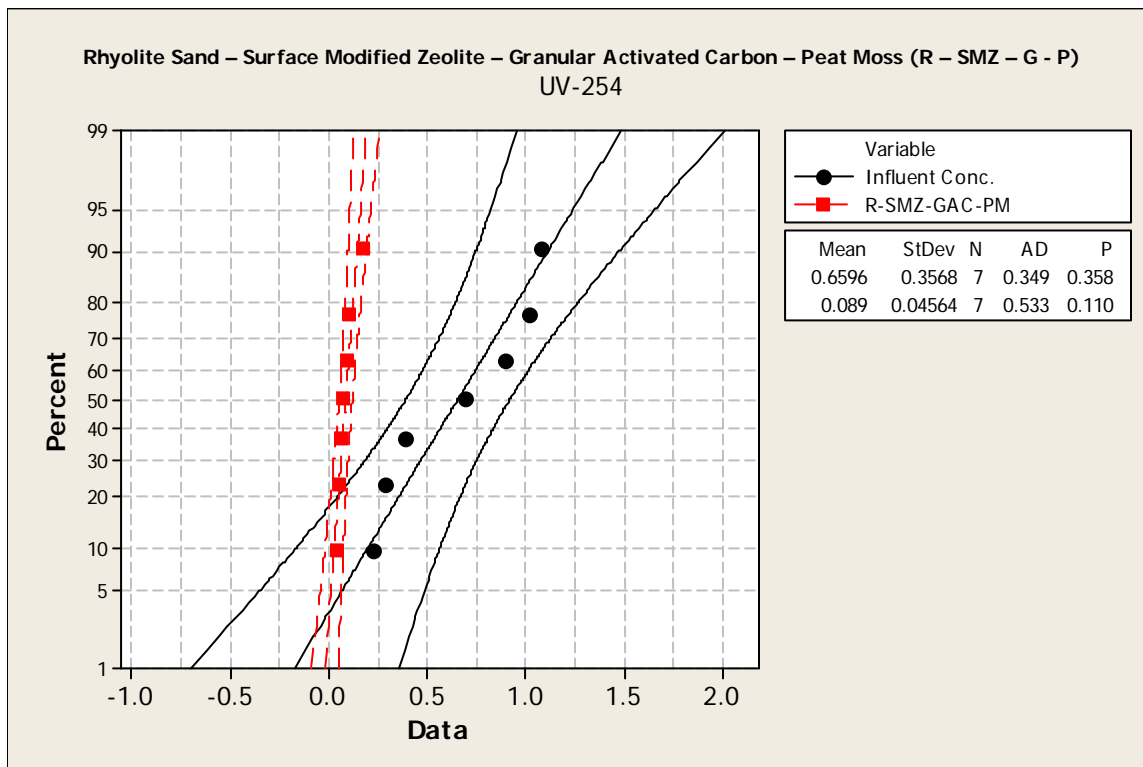


Figure A4-150. Probability plots for UV-254 and R-SMZ-GAC-PM mixed media column.

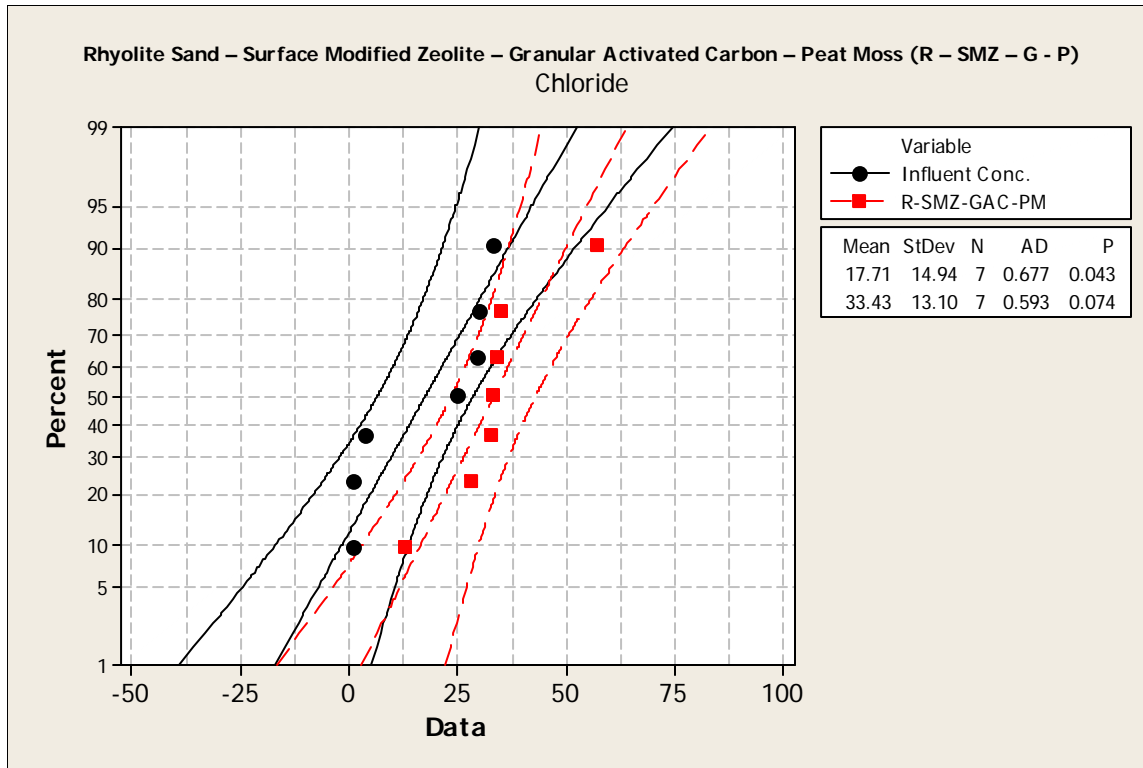


Figure A4-151. Probability plots for chloride and R-SMZ-GAC-PM mixed media column.

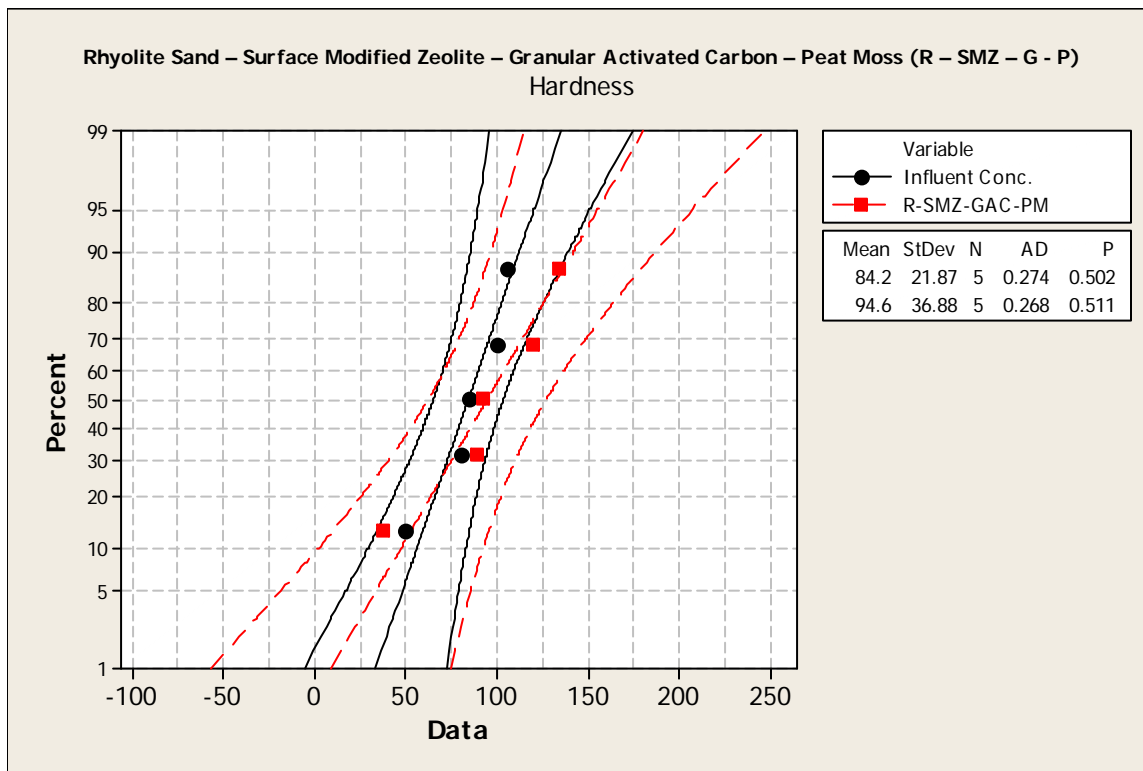


Figure A4-152. Probability plots for hardness and R-SMZ-GAC-PM mixed media column.

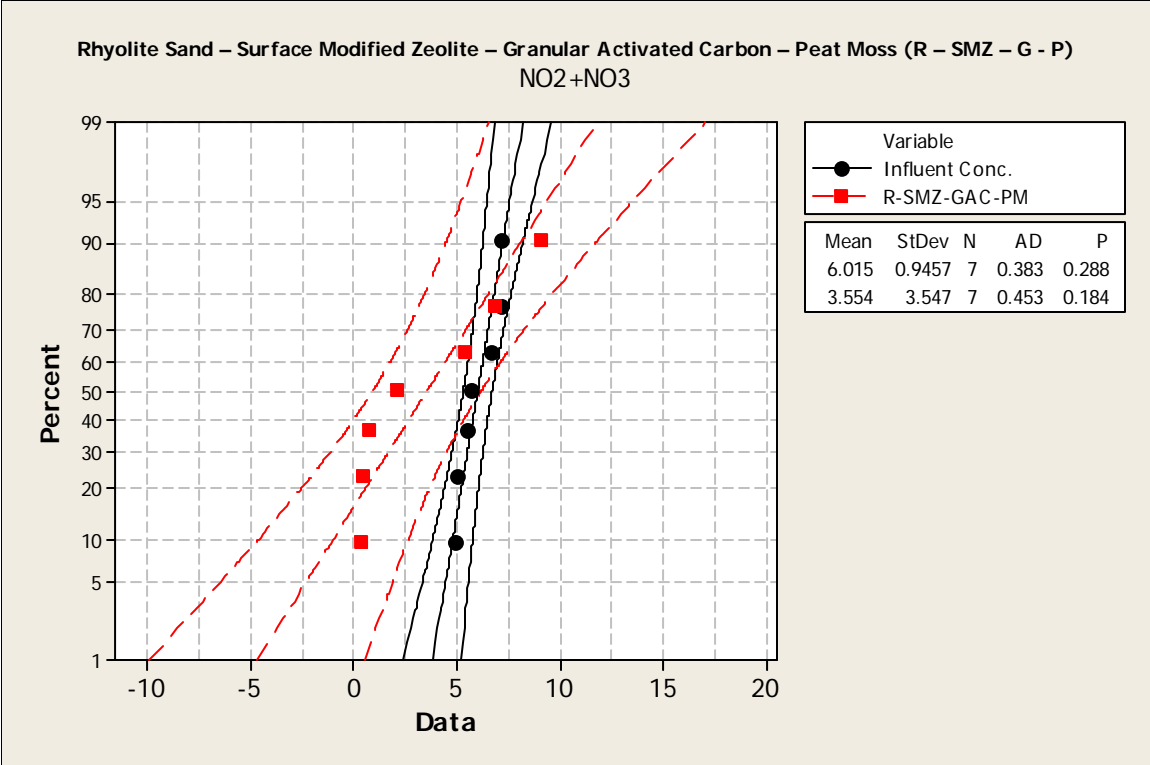


Figure A4-153. Probability plots for nitrite plus nitrate and R-SMZ-GAC-PM mixed media column.

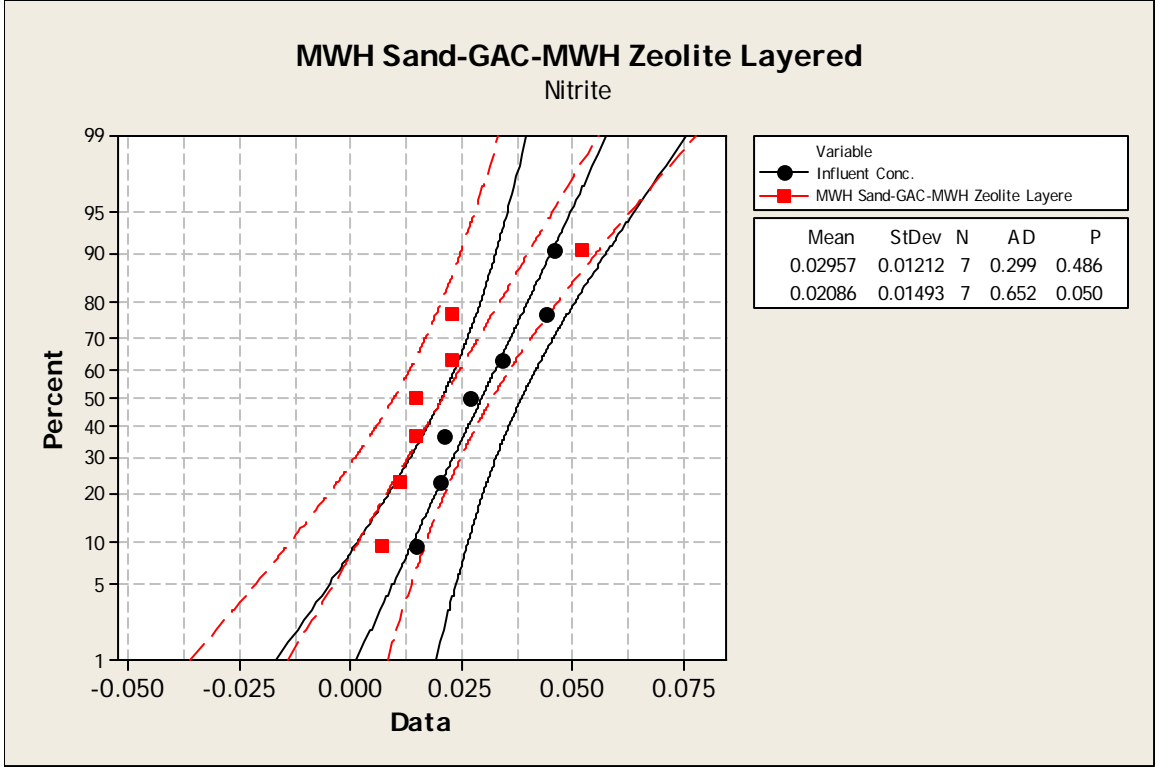


Figure A4-154. Probability plots for nitrite and sand, zeolite, GAC layered media column.

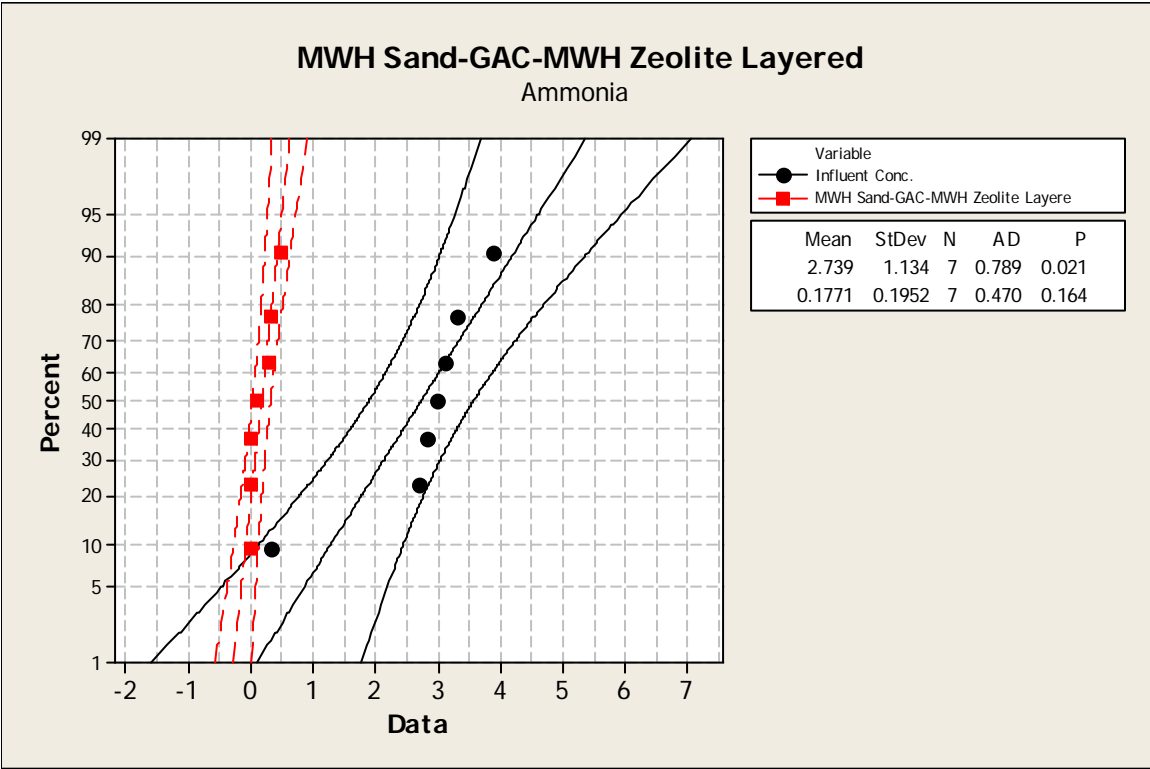


Figure A4-155. Probability plots for ammonia and sand, zeolite, GAC layered media column.

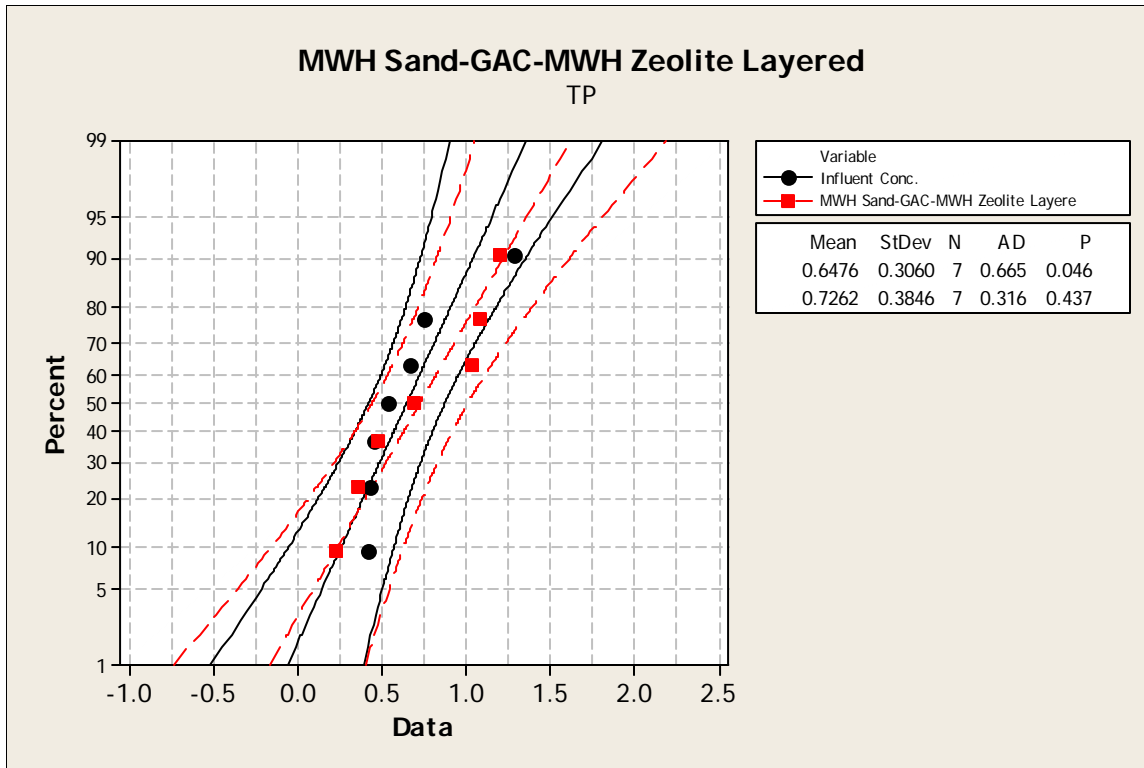


Figure A4-156. Probability plots for total phosphate and sand, zeolite, GAC layered media column.

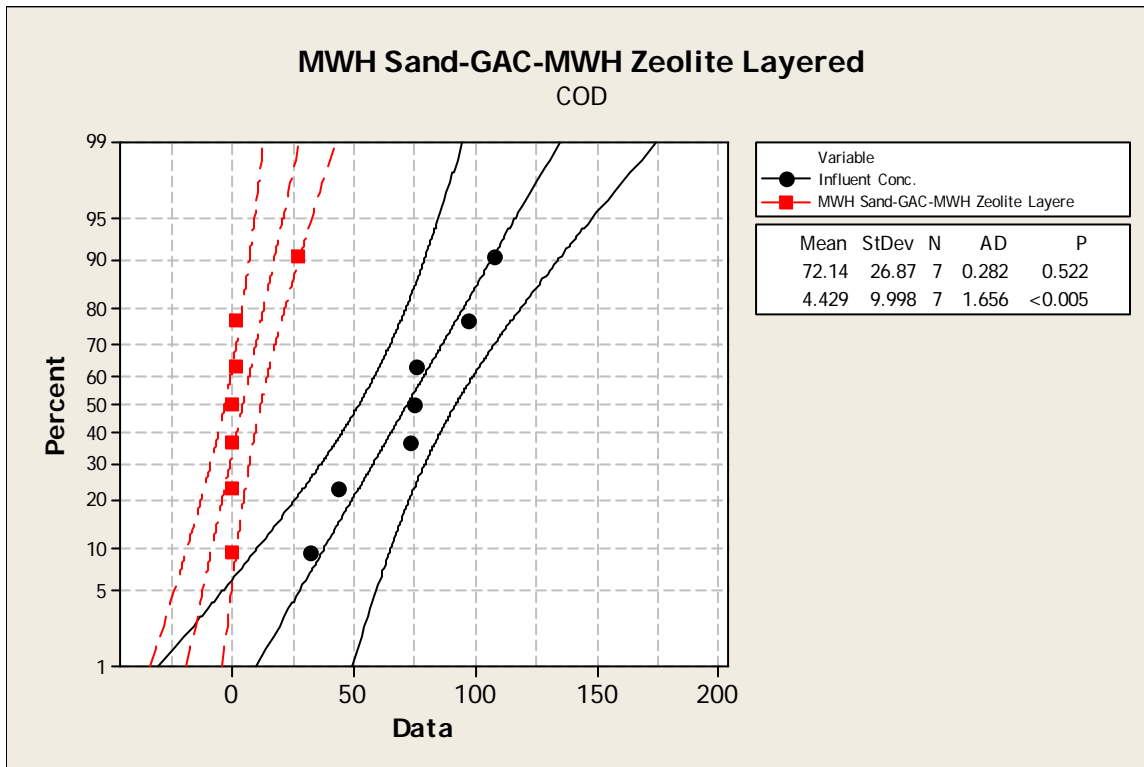


Figure A4-157. Probability plots for COD and sand, zeolite, GAC layered media column.

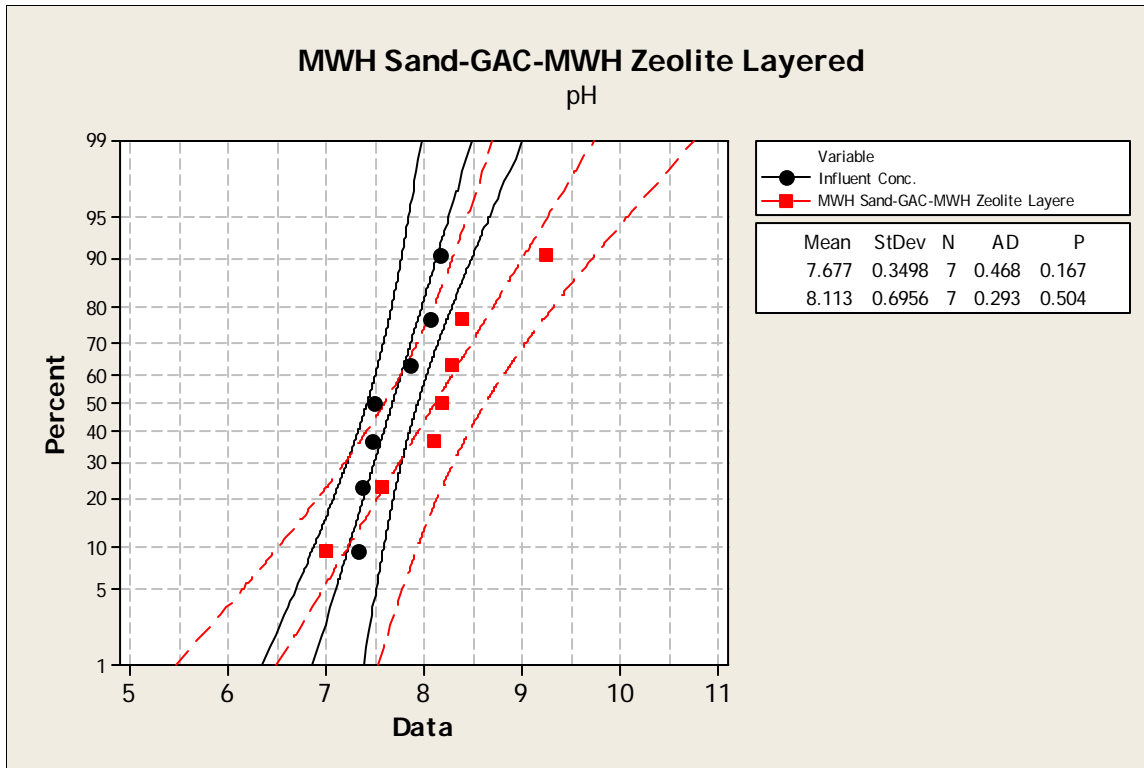


Figure A4-158. Probability plots for pH and sand, zeolite, GAC layered media column.

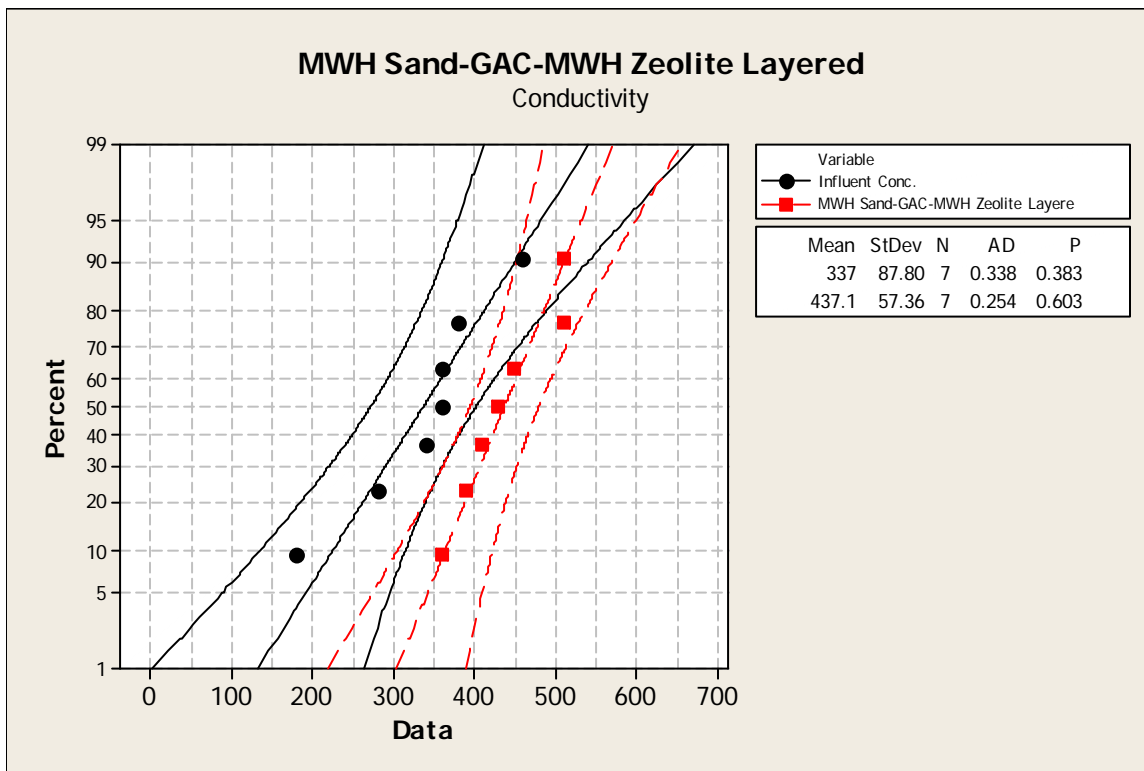


Figure A4-159. Probability plots for conductivity and sand, zeolite, GAC layered media column.

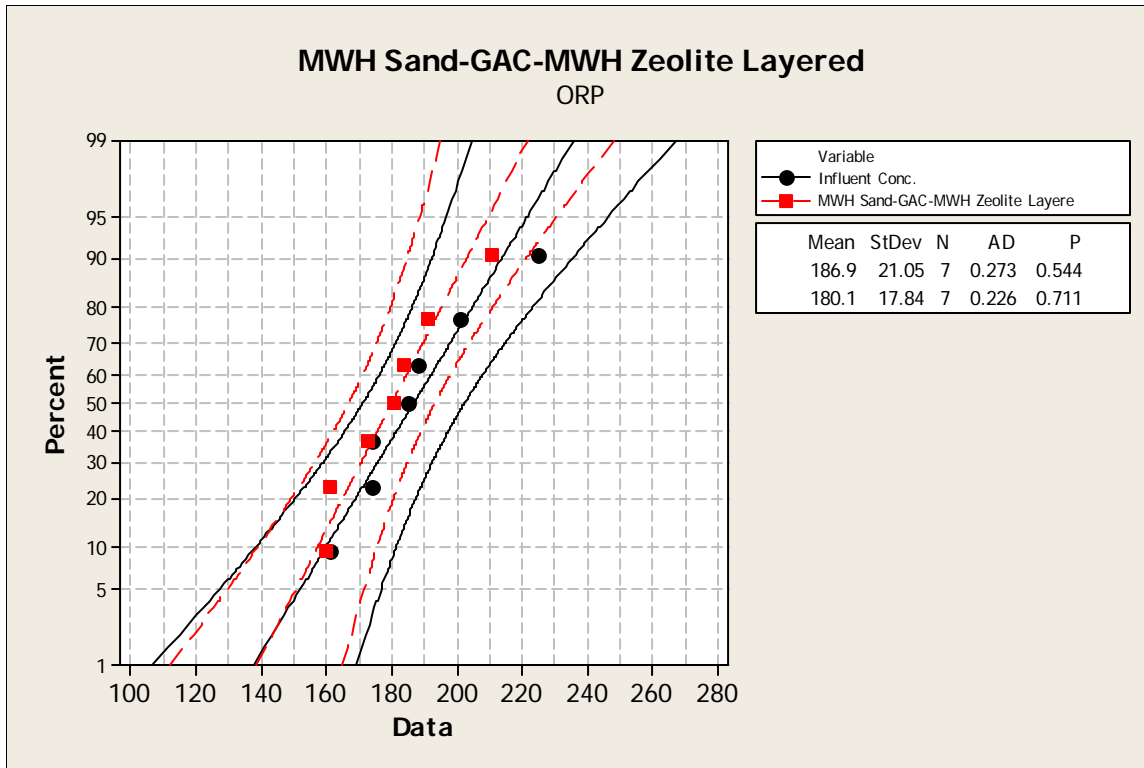


Figure A4-160. Probability plots for ORP and sand, zeolite, GAC layered media column.

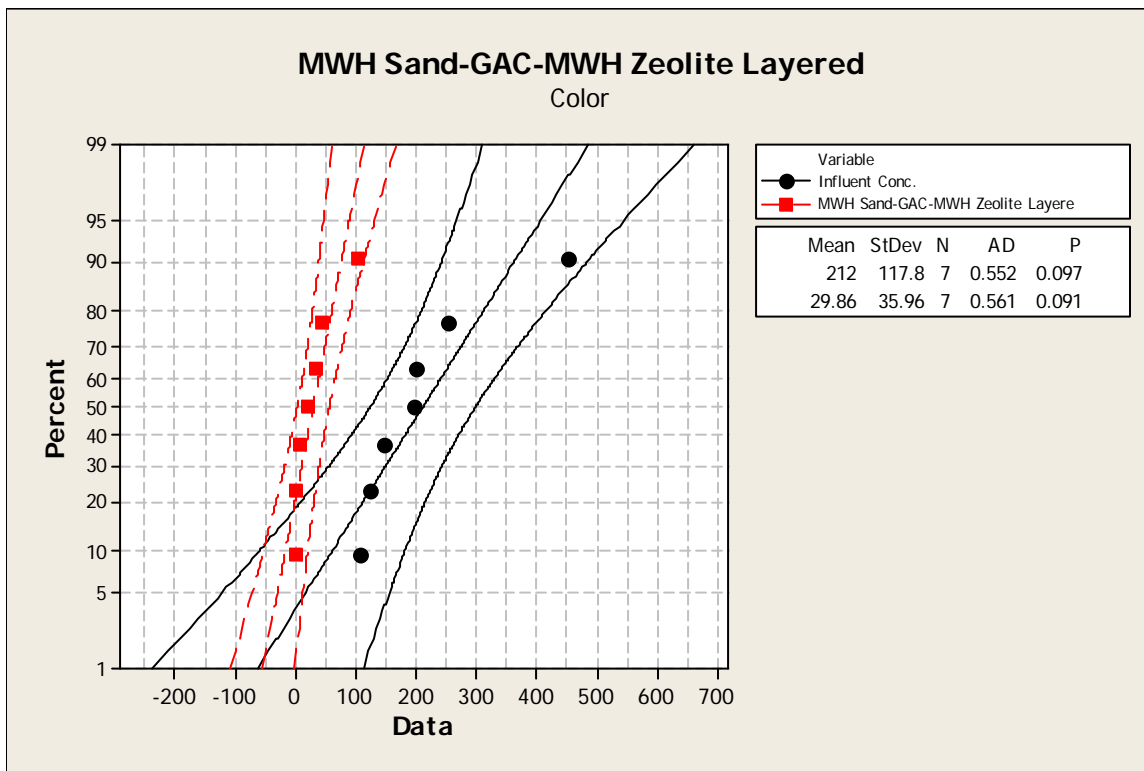


Figure A4-161. Probability plots for color and sand, zeolite, GAC layered media column.

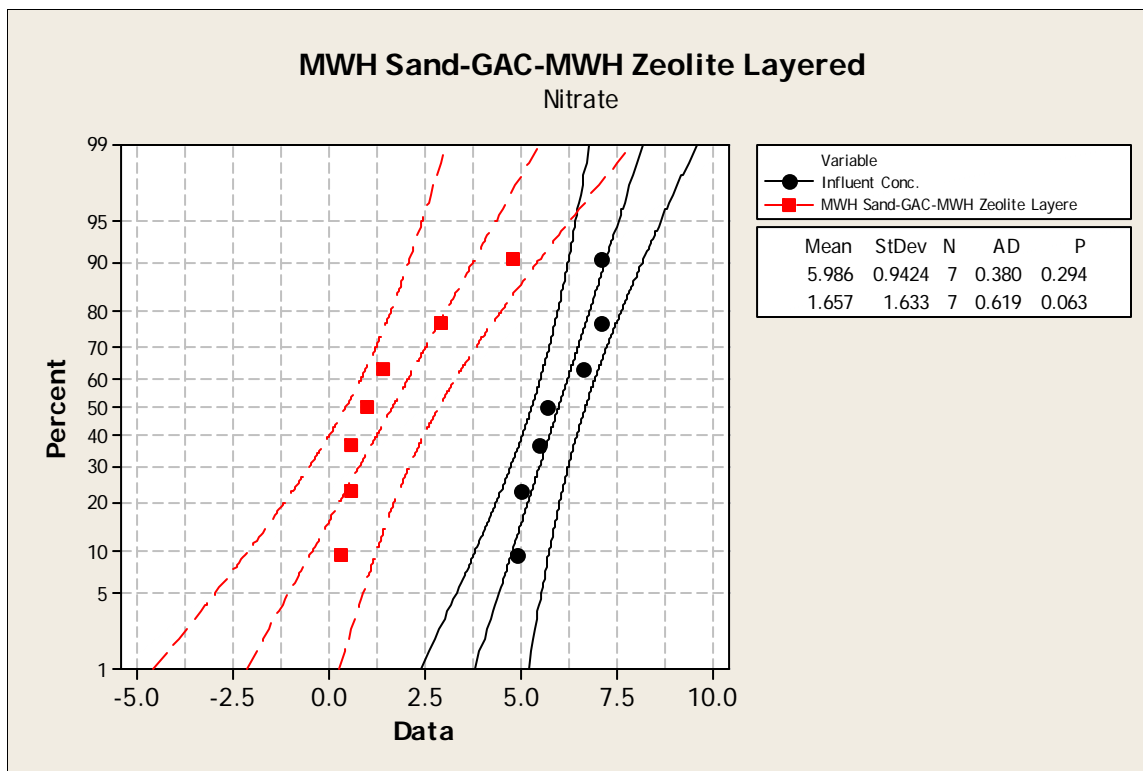


Figure A4-162. Probability plots for nitrate and sand, zeolite, GAC layered media column.

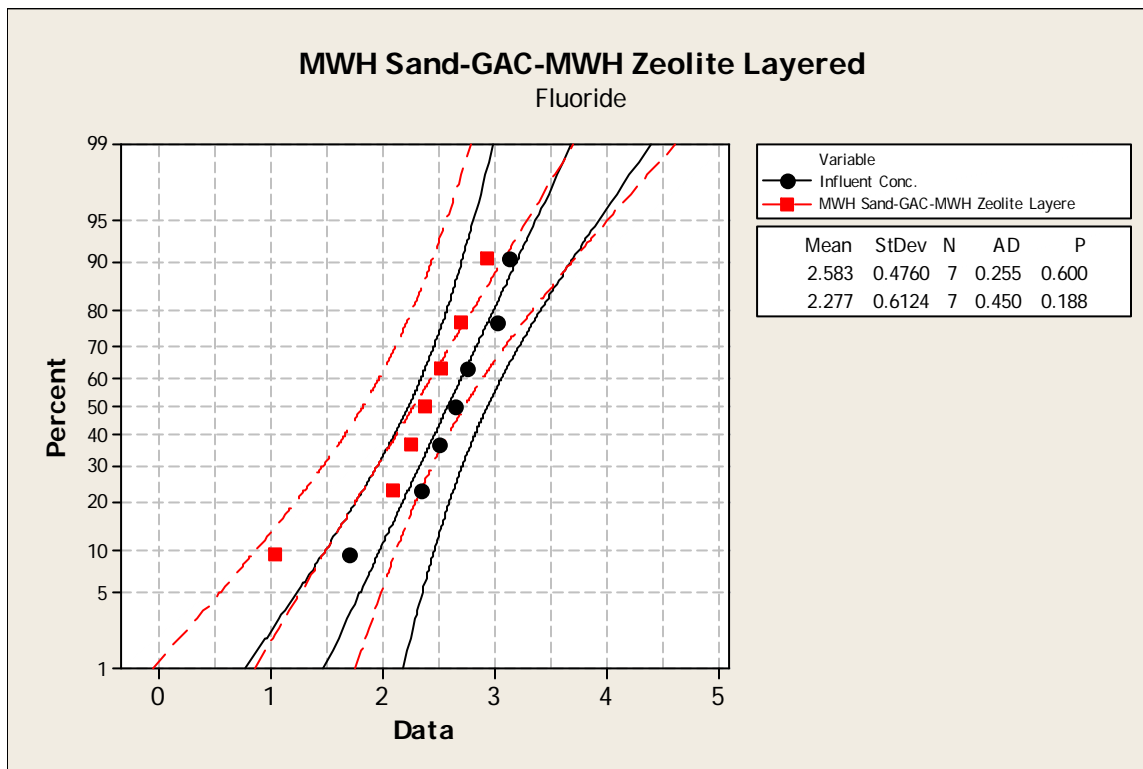


Figure A4-163. Probability plots for nitrite and sand, zeolite, GAC layered media column.

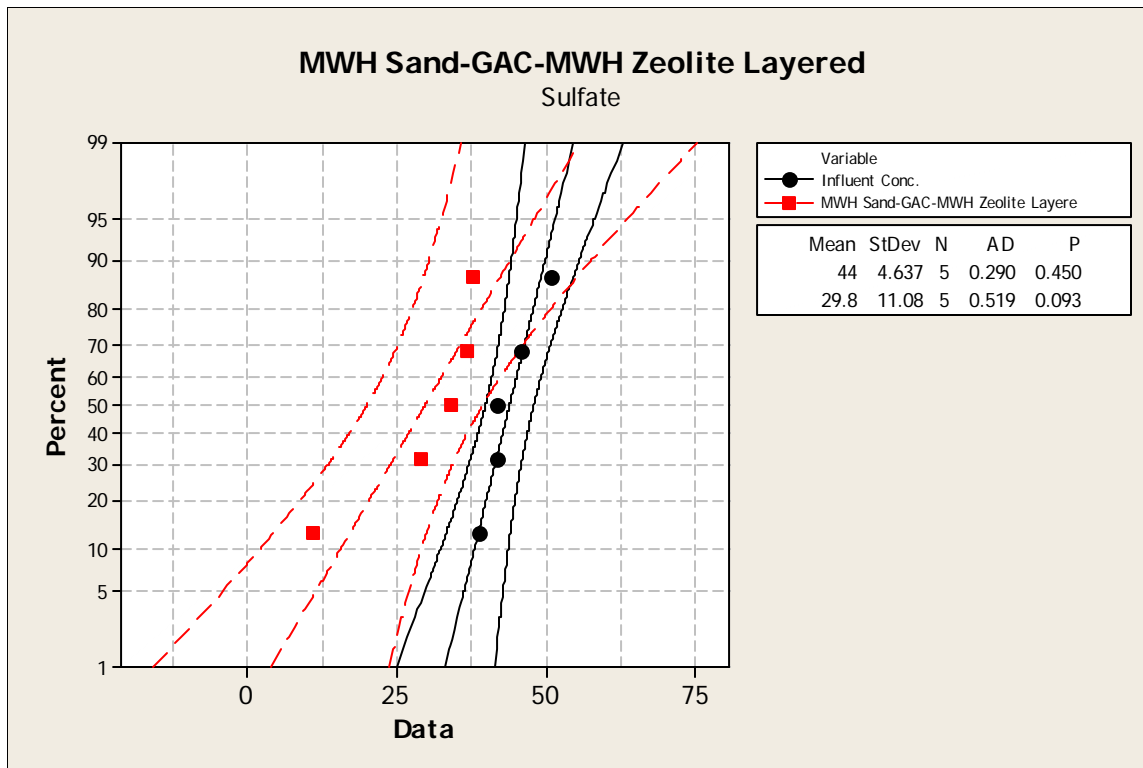


Figure A4-164. Probability plots for sulfate and sand, zeolite, GAC layered media column.

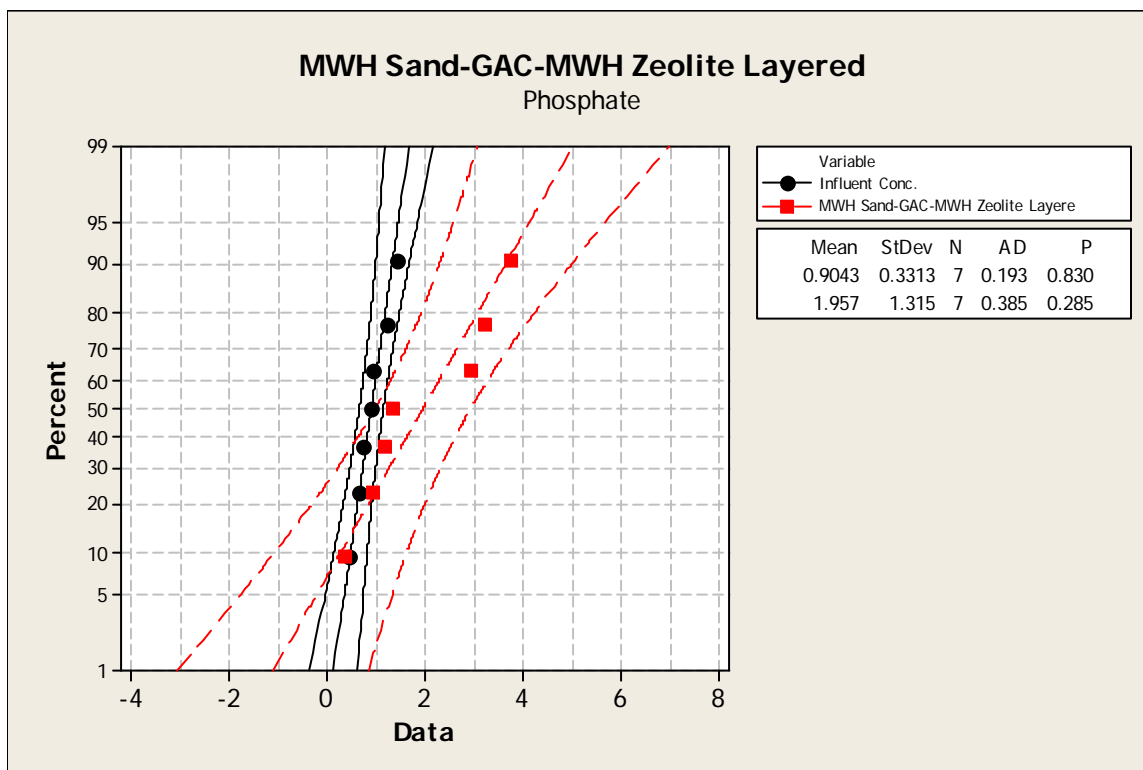


Figure A4-165. Probability plots for phosphate and sand, zeolite, GAC layered media column.

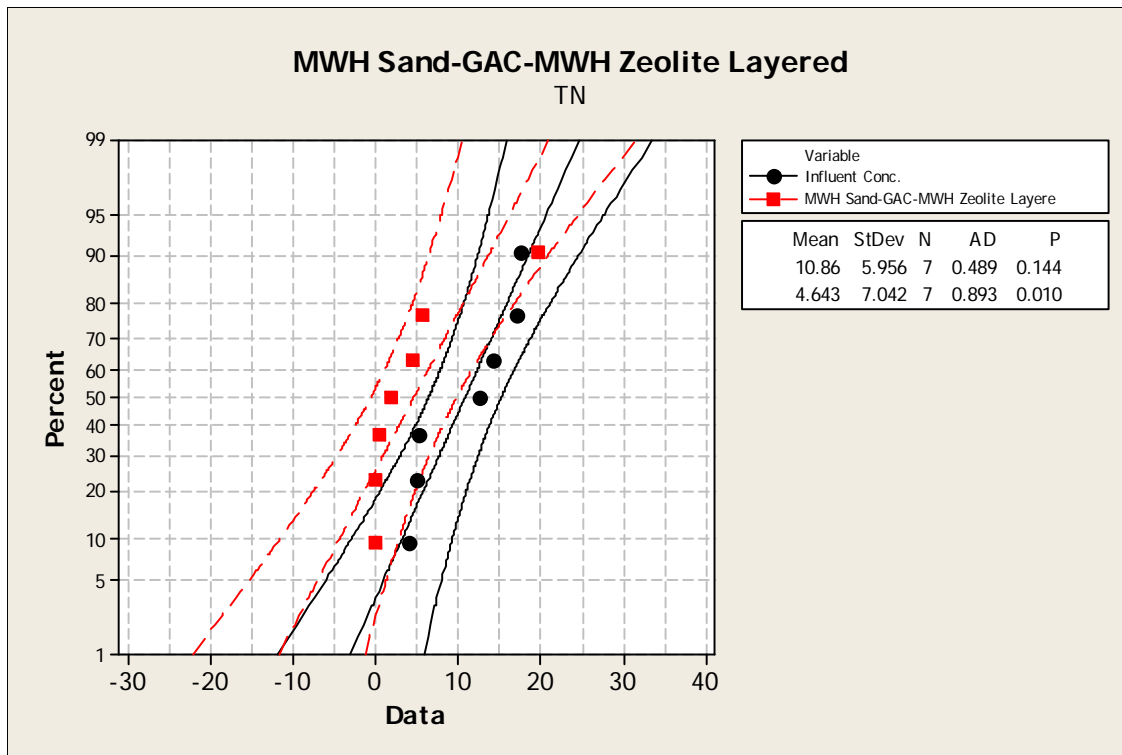


Figure A4-166. Probability plots for total nitrogen and sand, zeolite, GAC layered media column.

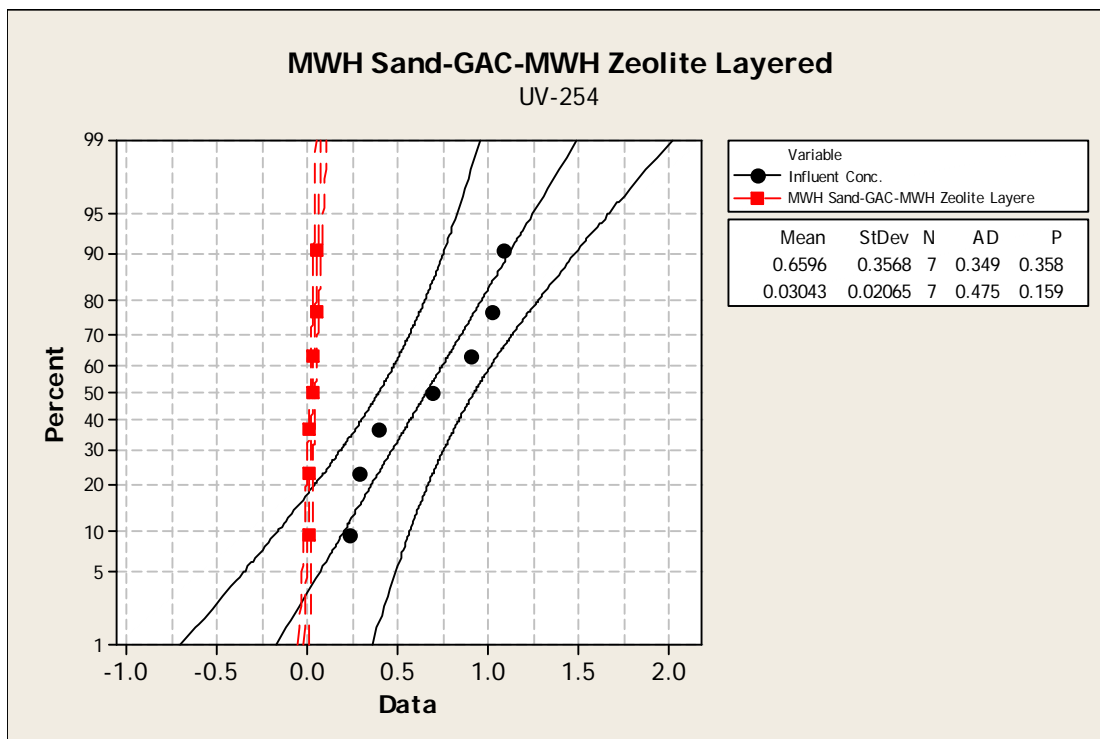


Figure A4-167. Probability plots for UV-254 and sand, zeolite, GAC layered media column.

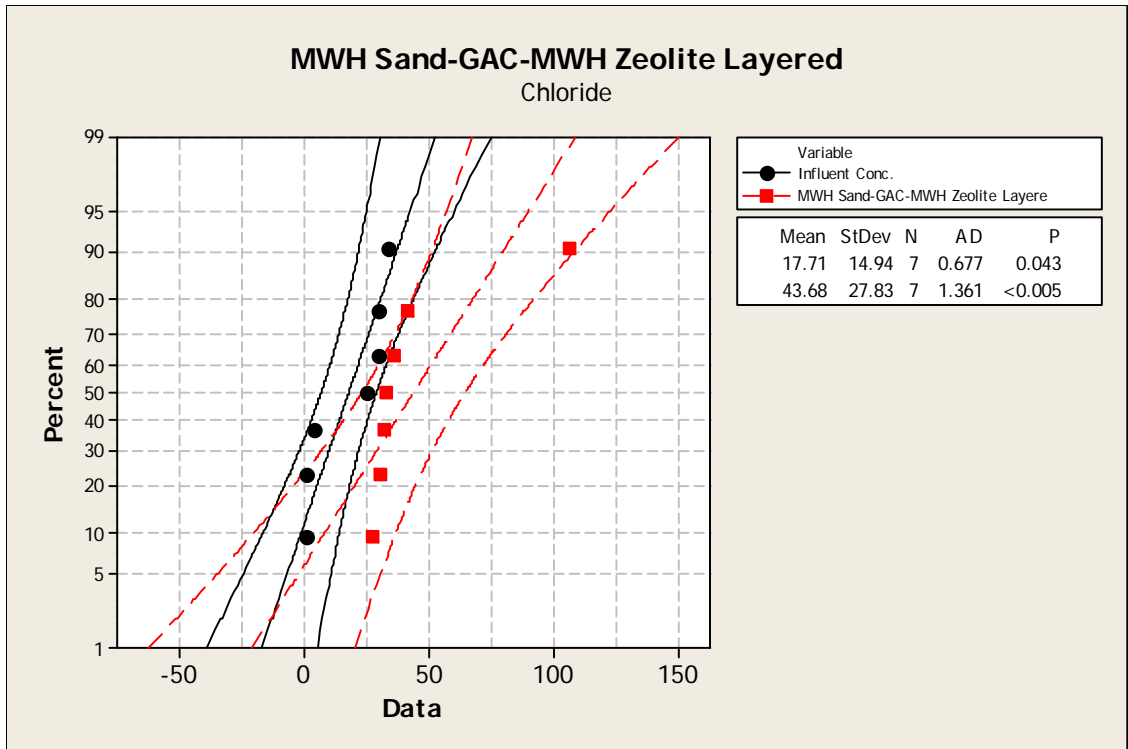


Figure A4-168. Probability plots for chloride and sand, zeolite, GAC layered media column.

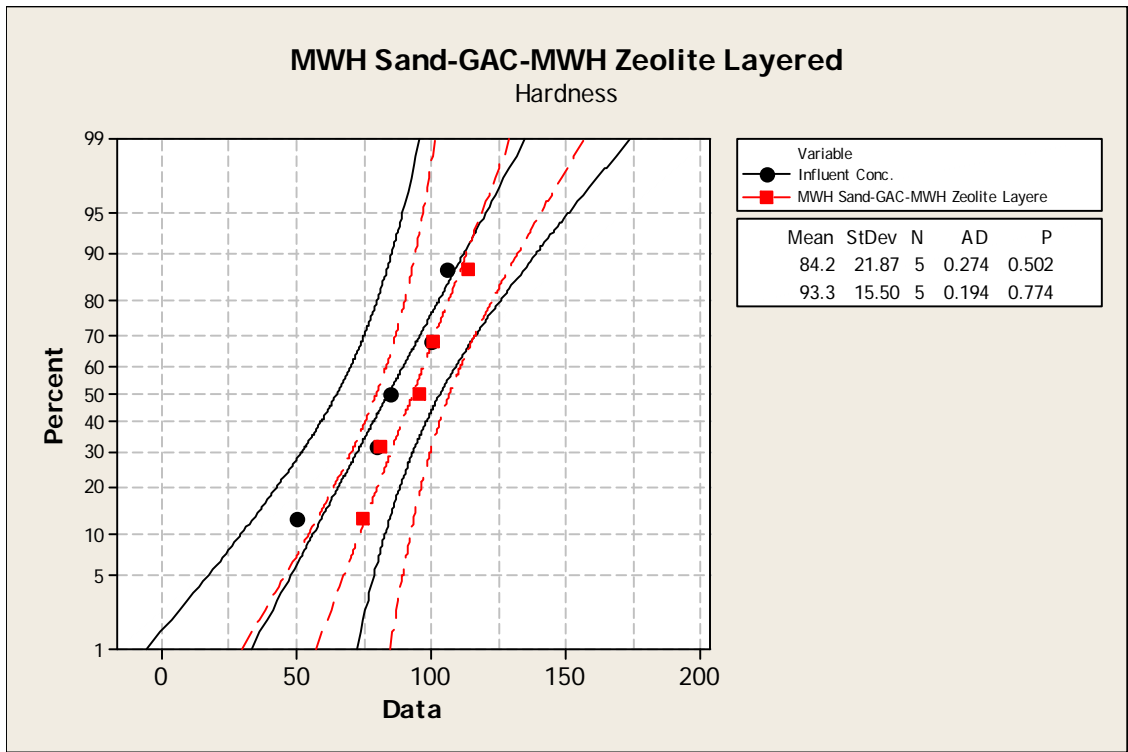


Figure A4-169. Probability plots for hardness and sand, zeolite, GAC layered media column.

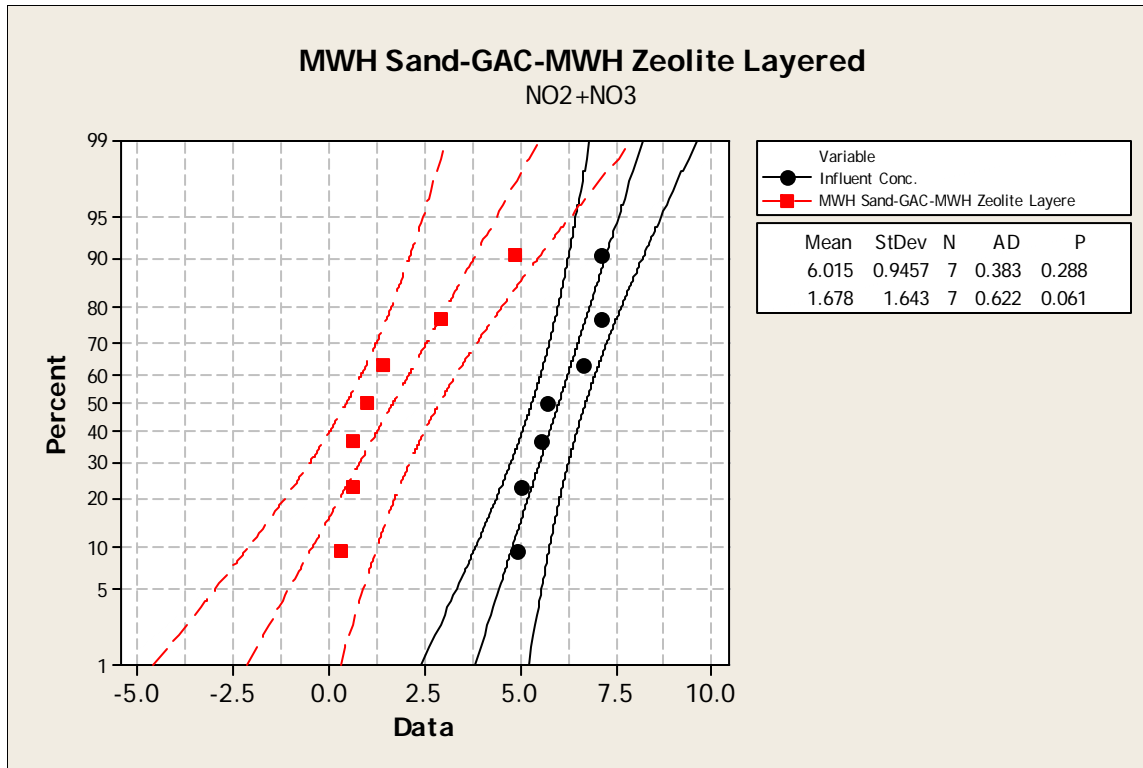


Figure A4-170. Probability plots for nitrite plus nitrate and sand, zeolite, GAC layered media column.