



Lecture 3: Water Treatment- Coagulation

3.3 Jar Test فحص الجرة (إيجاد افضل تركيز مضاف للشب او أي مختبر نحتاجه لتنقية المياه)

Jar test helps to determine the right amount of treatment chemicals: the lowest dose of chemicals that provides satisfactory settling is the dose used to treat the water (see figure below)



Example 1: set of data below of jars tests were conducted on a raw water containing turbidity of **15 NTU**. The objective is to find the optimal coagulant dose. إيجاد القيمة المثلى للمادة المخثرة.

Jar number	a	b	c	d	e	f
Alum dose (mg/L) التركيز المضاف	5	7	10	12	15	20
Turbidity (NTU) المتبقي	14	9.5	5	4.5	6	13

Solution: The results of the jar tests are plotted in Figure and the optimal alum dose was estimated to be about **12 mg/L**.

