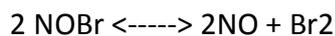# Answer on the question #43171, Chemistry, Physical Chemistry

Question:

2 NOBr <-----> 2NO + Br2

The equlibrium constant for the above reaction is 2x10^3 and the change in H is -56 kJ at 25 degrees celsius. Which of the following changes would cause this equlibrium to shift to the left?

a) addition of NOBr
b) addition of Br2
c) addition of a catalyst
d) removal of NO

Solution:

According to the Equilibrium law:

Changing the concentration of a chemical will shift the equilibrium to the side that would reduce that change in concentration. Therefore

1) The addition of NOBr will cause the equilibrium to shift to the right.
2) The addition of Br_2 will cause the equilibrium to shift to left.
3) Removal of NO will cause the equilibrium to shift to right

According to the catalyst definition, the addition of a catalyst doesn't cause the shift in equilibrium.

Answer: b)