Answer on Question #64916 – Chemistry – General Chemistry

What is the molarity of 555 L of a $Ba(HO)_2$ solution if the pH is 10.20?

Solution.

$pOH = 14 - pH = 14 - 10.20 = 3.80$

$pOH = -\log[OH^-]$

$[OH^-] = 0.000158489\ M\ OH^-$

$Ba(OH)_2 = (1 mole\ Ba(OH)_2 / 2 mole\ OH)$

$[Ba(OH)_2] = 0.000158489 \times ½ = 7.92 \times 10^{-5}\ M$

Answer: $[Ba(OH)_2] = 7.92 \times 10^{-5}\ M$