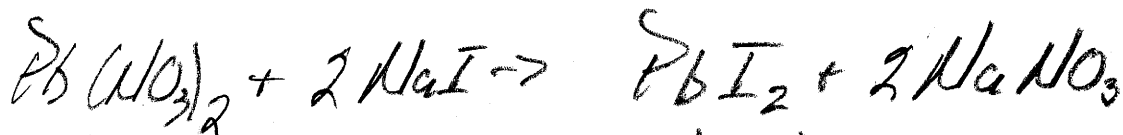


## Limiting Reactant Practice Quiz

1. When lead (II) nitrate reacts with sodium iodide, a double replacement reaction occurs. If 0.128 mol of lead (II) nitrate and 0.206 mol of sodium iodide are available to react:

- a. What is the limiting reactant?
- b. How many mols of the excess reactant will be left over?
- c. How many mols of lead (II) iodide will be produced? How many mols of sodium nitrate will be produced?



a.  $(.128 \text{ mol Pb}(\text{NO}_3)_2) \times \frac{1 \text{ mol PbI}_2}{1 \text{ mol Pb}(\text{NO}_3)_2} = .128 \text{ mol PbI}_2$  POSSIBLE

$(.206 \text{ mol NaI}) \times \frac{1 \text{ mol PbI}_2}{2 \text{ mol NaI}} = .103 \text{ mol PbI}_2$  POSSIBLE

$\therefore \text{NaI}$  is limiting reactant

b.  $(.206 \text{ mol NaI}) \times \frac{1 \text{ mol Pb}(\text{NO}_3)_2}{2 \text{ mol NaI}} = .103 \text{ mol Pb}(\text{NO}_3)_2$  USED

have  $.128 \text{ mol Pb}(\text{NO}_3)_2$   
 $.128 \text{ mol} - .103 \text{ mol} = .025 \text{ mol Pb}(\text{NO}_3)_2$  IN EXCESS