

Convert 1000 pint/sidereal day to ml/s given that 1 sidereal day = 23 hrs 46 minutes 4.091 s, 1 pint =  $4.732 \times 10^{-4} \text{ m}^3$ ,  $1 \text{ ml} = 1 \times 10^{-6} \text{ m}^3$ , 1 hr = 3600 s, and 1 min = 60 s.

SOLUTION:

$$\left(1000 \frac{\text{pint}}{\text{sid. day}}\right) \left(\frac{4.732 * 10^{-4} \text{ m}^3}{1 \text{ pint}}\right) \left(\frac{1 \text{ ml}}{1 * 10^{-6} \text{ m}^3}\right) \left(\frac{1 \text{ sid. day}}{(23 \text{ hrs})(3600 \text{ s/hr}) + (46 \text{ min})(60 \text{ s/min}) + 4.091 \text{ s}}\right) = 5.53 \frac{\text{ml}}{\text{s}}$$