

$$49 A_{260} \text{ units} \Rightarrow 2.058 \text{ mg/ml}$$

$$42 \frac{\mu\text{g}}{\text{ml}} / A_{260}$$

there were 5.0  $\mu\text{l}$   $\Rightarrow$  10 mg DNA per rod

### Scintillation Counting Standard

$$(2.2 \times 10^6 \text{ dpm/ml}) (0.01 \text{ ml}) = 22000 \text{ dpm}$$

the actual no. counts/attributable to this splice was:  $\frac{287,333 - 223,248}{10} = 6409 \text{ counts/min}$

$$\eta = \frac{6409}{22,000} = \underline{29.1\%}$$

$$50 \mu\text{l 7-20-1} \rightarrow 22,325 \text{ cpm}$$

$$\frac{22,325}{0.291} = 76,718 \text{ dpm}$$

$$= 3.49 \times 10^2 \mu\text{Ci}$$

$$= 9.42 \times 10^{-4} \mu\text{Moles}$$

$$= 0.294 \mu\text{g AFB}_1 \text{ in the } 50 \mu\text{l sample}$$

this was .05 of some

$$\Rightarrow 29.4 \mu\text{g of AFB}_1 \text{ on rod (10 mg)}$$

$$\boxed{2.94 \mu\text{g B}_1 / \text{mg DNA}}$$

$$32 \mu\text{moles}/\mu\text{mole}$$

$$\text{SA AFB}_1 = 0.027 \frac{\mu\text{M}}{\mu\text{Ci}}$$


$$2.2 \times 10^6 \frac{\text{dpm}}{\mu\text{Ci}} \downarrow 37.04 \frac{\mu\text{Ci}}{\mu\text{M}}$$

7-20-76 Quantitation of DNA from JE-3

There are 18 rods left from *in vitro* experiment JE-3. The DNA quantity per rod will be determined in order to get an idea on how much ~~the~~ adduct is bound per unit weight of DNA. The DNA variability per rod probably is less than 10-15%.

- Take (1) rod of DNA and dry with ether.
- dissolve in 5.0 ml H<sub>2</sub>O (charcoal column cleaned)
- place 50  $\mu$ l in 25 ml  
in 10 ml  
measure absorbance.

This is  
7-20-1



dilution	df	A <sub>260</sub>	A <sub>260</sub> <sup>corr</sup>
0.05 ml $\rightarrow$ 10 ml	200	0.245	4.9
0.05 ml $\rightarrow$ 25 ml	500	0.095	47.5

~~then st~~  
- Scintillation Counting

50  $\mu$ l of 7-20-1  $\rightarrow$  223,248/10 min

50  $\mu$ l + 10  $\mu$ l standard ( $2.2 \times 10^6$  dpm/ml)  
 $\rightarrow$  287,333/10 min

22,325 cpm 50  $\mu$ l of 5 ml = 100x dilution

2,232,500 = counts in entire sample (10 mg)

223,250 counts/mg DNA