

KELLER AND HECHEMAN

MEMORANDUM

TO: Peter L. de la Cruz  
FROM: Chuck Breder *CVB*  
DATE: February 5, 1986  
RE: Calculation of Potential BPA in the  
Diet from Vista's PVC

The potential amount of BPA in the diet is calculated  
as follows using the assumptions shown:

Assumptions

|                                                    |                      |
|----------------------------------------------------|----------------------|
| Density of PVC                                     | 1.4g/cm <sup>3</sup> |
| Thickness of PVC                                   | (0.076 cm) 30 mils   |
| Residual BPA                                       | 185 ppm              |
| Food volume/PVC surface area                       | 10g/in <sup>2</sup>  |
| Amount of BPA migration                            | 5%                   |
| Consumption factor for rigid and<br>semi-rigid PVC | 5.5%                 |

Amount of BPA/in<sup>2</sup> of 30 mil PVC food contact surface:

$$\begin{aligned} 1 \text{ in}^2 \text{ PVC, 30 mil thick} &= 6.45 \text{ cm}^2 \times 0.076 \text{ cm} \\ &= 0.49 \text{ cm}^3 \text{ PVC} \end{aligned}$$

$$0.49 \text{ cm}^3 \text{ PVC} \times 1.4 \text{ g PVC/cm}^3 = 0.686 \text{ g PVC}$$

$$\begin{aligned} 0.686 \text{ g PVC} \times 185 \times 10^{-6} \text{ g BPA/g PVC (PPM)} \\ &= 127.6 \times 10^{-6} \text{ g BPA} \\ &= 127.6 \text{ ppm BPA} \end{aligned}$$

Memorandum  
Peter L. de la Cruz  
February 5, 1986  
Page Two

If 5% of BPA migrates to 10g food, the concentration in food is:

$$\frac{0.05 \times 127.6 \text{ ppm}}{10\text{g food}} = 0.638 \text{ ppm BPA in food}$$

BPA in the total diet equals BPA concentration in food x PVC  
consumption factor:

$$0.638 \text{ ppm} \times 0.055 = 0.035 \text{ ppm} = 35 \text{ ppb}$$