

## Stability of FlexFoil Bags with Nitric Oxide (NO) Cindy Kuhlman

### Summary

SKC FlexFoil<sup>®</sup> bags were tested to verify that 10 ppm of nitric oxide contained in the bag would not degrade or permeate out of the bag over a 48-hour period. The results showed that nitric oxide did store in a FlexFoil bag with stainless steel or polypropylene fitting for 2 days. The polypropylene fitting performed slightly better than the stainless steel fitting, with approximately 10% loss over 2 days.

### Method

Four 3-liter FlexFoil bags, two with a polypropylene fitting (SKC Part No. 245-23) and two with a stainless steel fitting (SKC Part No. 245-03), were filled with 10 ppm of nitric oxide (NO). Dräger detector tubes for nitric oxide (Dräger Part. No. CH29401) were used to monitor the bags over a 2-day period at ambient temperatures. The results are listed in Table 1.

**Table 1. Stability of Nitric Oxide in FlexFoil Bags**

| Analyte | Fitting Material | Day 0 (ppm) | Day 1 (ppm) | Day 2 (ppm) | Recovery (%) |
|---------|------------------|-------------|-------------|-------------|--------------|
| NO      | PP               | 10          | 9.5         | 9.0         | 90           |
| NO      | PP               | 10          | 9.5         | 9.0         | 90           |
| NO      | SS               | 10          | 9.0         | 8.0         | 80           |
| NO      | SS               | 10          | 9.0         | 8.0         | 80           |

*PP = Polypropylene      SS = Stainless steel*

*Note: Criteria = Successful storage is recovery of  $\geq 80\%$  of analyte*

### Conclusion

SKC FlexFoil bags will maintain a concentration of 10 ppm nitric oxide for 2 days with either a polypropylene fitting or a stainless steel fitting.