COMPONENTS:

(1) Benzo[ghi]perylene; $C_{22}H_{12}$; [191-24-2]

(2) Water; H_2O; [7732-18-5]

ORIGINAL MEASUREMENTS:

Mackay, D.; Shiu, W.Y.

J. Chem. Eng. Data 1977, *22*, 399-402.

VARIABLES:

One temperature: 25°C

PREPARED BY:

M.C. Haulait-Pirson

EXPERIMENTAL VALUES:

The solubility of benzo[ghi]perylene in water at 25 °C was reported to be 0.00026 mg(1) dm^{-3} sln and $x_1 = 1.73 \times 10^{-11}$.

The corresponding mass percent calculated by the compiler is 2.6×10^{-8} g(1)/100 g sln.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

A saturated solution of (1) in (2) was vigorously stirred in a 250 mL flask for 24 hrs. and subsequently settled at 25°C for at least 48 hrs. Then the saturated solution was decanted and filtered and 50-100 mL extracted with approximately 5 mL of cyclohexane in a separatory funnel. After shaking for 2 hrs. the cyclohexane extract was removed for analysis. An Aminco-Browman spectrophotofluorometer (American Instruments Ltd.) was used for analysis. Many details are given in the paper.

SOURCE AND PURITY OF MATERIALS:

(1) Aldrich Chemicals, Eastman Kodak, or K and K Laboratories, commercial highest grade; used as received.

(2) doubly distilled.

ESTIMATED ERROR:

soly. ± 10^{-5} mg(1) dm^{-3} sln (maximum deviation from several determinations).

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzo[ghi]perylene; $C_{22}H_{12}$; [191-24-2] (2) Salt Water	Krasnoshchekova, R.Ya.; Pakhapill, Yu.A.; Gubergrits, M.Ya. *Khim. Tverd. Topl.* 1977, *11*, 133-6.
VARIABLES:	**PREPARED BY:**
One temperature: 25°C Salinity: 6 g/kg sln (ref. 1)	M. Kleinschmidt and D. Shaw

EXPERIMENTAL VALUES:

The solubility of benzo[ghi]perylene in salt water was reported to be 0.21 μg/L.

The corresponding mass percent and mole fraction, x_1, calculated by the compilers are 2.1×10^{-8} g(1)/100 g sln and 1.4×10^{-11} assuming a solution density of 1.004 kg/L.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

1 L of a 0.5 g/L solution of the hydrocarbon in acetone was distributed over the inside surface of a 1-L round-bottomed flask; the acetone was evaporated with gentle heating. 0.5 L water [or salt water] was added to the dried residue, and the solution was stirred for 6 hr and allowed to settle for 16-18 hr. The upper layer (about 0.3 L) was taken for analysis. The solution was centrifuged twice at 7000 g to remove suspended particles. The hydrocarbon was extracted with benzene and concentrated by evaporation, then purified using thin-layer chromatography. Spectrometric analysis of an octane solution of the hydrocarbon was done using the quasilinear luminescence spectra.

SOURCE AND PURITY OF MATERIALS:

Not given.

ESTIMATED ERROR:

temp. ± 1°C
soly. ± 0.048
type of error not specified

REFERENCES:

1. Krasnoshchekova, R.Ya; Gubergrits, M.Ya. *Neftekhimiya* 1973, *13*, 885.