The Rensselaer
Color
Measurement
Laboratory

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Mr. Rolf G. Kuehni
V E R O N A
Mobay Chemical Corporation
P. O. Box 385
Union Metropolitan Park
Union, N. J. 07083

Dear Rolf:

In reply to your letter of February 17, 1976, Ruth and I note that
you asked her the same question about the term "unit color difference
perception ellipses" in your letter of May 19, 1975. In her reply to
that letter she told you that we had no intention of implying that our
threshold data could be used as a metric. We still feel this way.

The reason for this, and the reason why we do not feel that the
ellipses can be enlarged, is that they represent one level of probability
on a bivariate normal distribution. How would you enlarge them? You
can't just multiply by, say, 10 and have a color difference 10 times as
large. The surface doesn't behave that way.

Our ellipses are at the 60-odd percent level, representing one
standard deviation. One could draw other larger ellipses representing
two or three standard deviations, but then you have about exhausted the
practical range. This is not the way a metric behaves.

Sincerely yours,

Fred

Fred W. Billmeyer, Jr.

FWB/li

cc: R. M. Rich