June 30, 1953

Dear Norton:

The cultures you requested are being sent under separate cover. I think you will have better success with the nutrient broth + .8% agar stabs.

My notes are not handy just now— the transduction-protection expts. were about as follows:

Infect SW-950 with 22(LT2), multiplicity about .15. Plate sam- on D(O) + meth, with and without 22V(SW950). Dilute out and plate on EMB Lac with and without 22V. The same is done with untreated SW-950. The results measure the protection against 22V resulting from infection with 22, and the recovery of (nearly) all the transductions in the 15% of protected (i.e. 22-infected, and subsequently lysogenised) SW-950. It is essential to use suspensions nearly free of (rough) 22V-resistant bacteria, and to ensure that 22V is completely blocked by prior infection with 22. Perhaps your 22V is more virulent.

Owing to the low multiplicities, the experiment is hardly feasible except with this high rate of transduction in SW-950.

You asked about the history of the lyophil tubes. There has been no catastrophe. Many of the tubes had (and some of the survivors still have) cracks where the glass was too thick or too uneven. It takes a long time for the cracks to grow, and for moisture to diffuse in and accumulate. If we could keep the tubes in a dry atmosphere, we could probably ignore the cracks. Things are pretty much under control now; I have not yet had the full-pedigree sheets typed up just yet. The lab is pretty miserable during this hot weather.

Evelyn Witkin wrote recently for cultures for the E. coli crossing expts. Do you think you can ensure that they will be kept from year to year? The 1/2 nutrient agar stabs should do quite well for these too.

Sincerely,

Joshua Lederberg

P.S. Have you seen
Iseki's papers: Proc. Japan Acad.
29:121, 1953?