

Inhibition Assay

OBJECTIVE:

To determine whether or not *Lactobacillus plantarum* (LP29) has the potential to inhibit the growth of other probiotic strains when blended together in a commercial product.

METHOD:

Lactobacillus plantarum (LP-29) was spotted on the center of a MRS agar plate and incubated anaerobically for 24 hour at 37 degrees C. MRS broths were grown for 24 hours in a 37C water bath of the following strains (Broths inoculated with Bifidobacterium strains contained 0.05% cysteine-HCl):

<i>Bifidobacterium lactis</i>	BL-34
<i>Bifidobacterium lactis</i>	Bi-07
<i>Lactobacillus acidophilus</i>	LA-1
<i>Lactobacillus paracasei</i>	F-19
<i>Lactobacillus salivarius</i>	LS-30
<i>Lactobacillus plantarum</i> (control)	LP-29
<i>Lactobacillus rhamnosus</i>	LR-44

Following the 24 hour incubation, a sterile solution of agar was added to each broth to achieve a 0.7% soft agar concentration in each broth. A 7ml aliquot was applied over the spotted *Lactobacillus plantarum* (LP-29) plates. Plates were incubated anaerobically for 72 hours at 37C. The plates were examined for zones of inhibition around the growth spot of *Lactobacillus plantarum* (LP-29).

OBSERVATIONS: SEE PHOTOS

- ▶ Significant zones of inhibition were observed on the plates of *Bifidobacterium lactis* (BL-34) and *Bifidobacterium lactis* (Bi-07).
- ▶ Moderate zones of inhibition were observed on the plates of *Lactobacillus salivarius* (LS-30).
- ▶ Little to no inhibition was observed on the plates of *Lactobacillus plantarum* (LP-29) control, *Lactobacillus paracasei* (F-19), and *Lactobacillus acidophilus* (LA-1).

