```
(*Py(mu,6)*)
n = 6;
Ymu = Table[γμi, {γμi, {0, 0.005, 0.05, 0.5, 0.5, 0.5, 0.5}}] *
   Table[n!/(i! (n - i)!), {i, {0, 1, 2, 3, 4, 5, 6}}] *
   Table[(μ/μ0)^i/(1 + μ/μ0)^n, {i, {0, 1, 2, 3, 4, 5, 6}}]
```

$$\left\{0, \frac{0.03\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0}, \frac{0.75\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^2}, \frac{10.\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^3}, \frac{7.5\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^4}, \frac{3.\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^5}, \frac{0.5\,\mu^6}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^6}\right\}$$

```
Ymusim = FullSimplify[0.03 μ/(1 + μ/μ0)^6 μ0 + 0.75 μ^2/(1 + μ/μ0)^6 μ0^2 + 10 μ^3/(1 + μ/μ0)^6 μ0^3,
   + 7.5 μ^4/(1 + μ/μ0)^6 μ0^4 + 3 μ^5/(1 + μ/μ0)^6 μ0^5 + 0.5 μ^6/(1 + μ/μ0)^6 μ0^6]
```

$$\frac{\mu\,\mu 0^3\left(10.\,\mu^2 + 0.75\,\mu\,\mu 0 + 0.03\,\mu 0^2\right)}{\left(\mu+\mu 0\right)^6}$$

```
Ym = Table[γmi, {γmi, {0, 0.04, 0.2, 1.0, 1.0, 1.0, 1.0}}] *
   Table[n!/(i! (n - i)!), {i, {0, 1, 2, 3, 4, 5, 6}}] *
   Table[(μ/μ0)^i/(1 + μ/μ0)^n, {i, {0, 1, 2, 3, 4, 5, 6}}]
```

$$\left\{0, \frac{0.24\,\mu}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0}, \frac{3.\,\mu^2}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^2}, \frac{20.\,\mu^3}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^3}, \frac{15.\,\mu^4}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^4}, \frac{6.\,\mu^5}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^5}, \frac{1.\,\mu^6}{\left(1+\frac{\mu}{\mu 0}\right)^6 \mu 0^6}\right\}$$

```
Ymsim = FullSimplify[
   0.24 μ/(1 + μ/μ0)^6 μ0 + 3 μ^2/(1 + μ/μ0)^6 μ0^2 + 20 μ^3/(1 + μ/μ0)^6 μ0^3 + 15 μ^4/(1 + μ/μ0)^6 μ0^4 + 6 μ^5/(1 + μ/μ0)^6 μ0^5 + 1 μ^6/(1 + μ/μ0)^6 μ0^6]
```

$$\frac{1}{\left(\mu+\mu 0\right)^6}\mu\left(\mu^5 + 6.\,\mu^4\,\mu 0 + 15.\,\mu^3\,\mu 0^2 + 20.\,\mu^2\,\mu 0^3 + 3.\,\mu\,\mu 0^4 + 0.24\,\mu 0^5\right)$$

```
(* Py = Ymu /(Ym+km) *)
Pymu6 = FullSimplify[(μ μ0^3 (10 μ^2 + 0.75 μ μ0 + 0.03 μ0^2))/(μ + μ0)^6 /
   (0.5 + (μ (μ^5 + 6 μ^4 μ0 + 15 μ^3 μ0^2 + 20 μ^2 μ0^3 + 3 μ μ0^4 + 0.24 μ0^5)) / (μ + μ0)^6)]
```

$$\left(6.66667\,\mu\,\mu 0^3\left(\mu^2 + 0.075\,\mu\,\mu 0 + 0.003\,\mu 0^2\right)\right) /$$
$$\left(1.\,\mu^6 + 6.\,\mu^5\,\mu 0 + 15.\,\mu^4\,\mu 0^2 + 20.\,\mu^3\,\mu 0^3 + 7.\,\mu^2\,\mu 0^4 + 2.16\,\mu\,\mu 0^5 + 0.333333\,\mu 0^6\right)$$