

# **Relatório EDPs HCV**

para a reuniao do dia 06/17/21(mes/dia)

**DE 11param para 8 dias PATBXX e CXX comparação de 2 vezes**  
executando o mesmo código

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Matheus Avila Moreira de Paula

UFJF

- Foram realizadas duas execuções do mesmo código. Também fiz um teste com B07 e B16 tirando um ponto
- Não fiz a média e o desvio padrão dos parâmetros porque, como será mostrado, os parâmetros variam de acordo com as execuções
- Foi feita uma DE para 8 dias usando V0 como o valor do primeiro ponto experimental
- 30 popsize 30 maxiter Parâmetros e bounds:
  - $\epsilon_r = (0.1, 0.99)$   $\epsilon_\alpha = (0.1, 0.99)$   $\epsilon_s = (0.1, 0.99)$
  - $\alpha = 20,60$  //  $r = 0.1, 10$  //  $\delta = (0.01, 2)$  //  $\mu_c = (0.1, 2)$
  - $\rho = (1, 15)$
  - $\theta = (1, 2)$
  - $\sigma = (1, 2)$
  - $c = (10, 25)$

Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.6	0.599
$\epsilon_\alpha$	0.76	0.579
$\epsilon_s$	0.95	0.964
$\alpha$	20.6	22.67
$r$	0.54	1.846
$\delta$	0.15	0.3327
$\mu_c$	0.66	1.779
$\rho$	4.99	8.435
$\theta$	1.3	1.564
$\sigma$	1.27	1.394
$c$	11.4	11.857
erro	0.0647	0.064

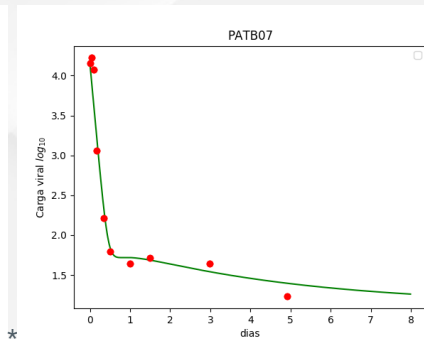
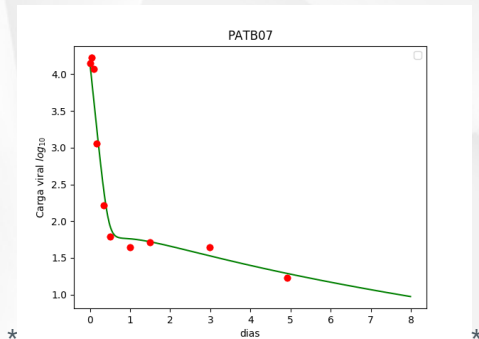


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.334	0.232
$\epsilon_\alpha$	0.478	0.434
$\epsilon_s$	0.2345	0.132
$\alpha$	42.94	22.44
$r$	0.1217	0.1396
$\delta$	0.3409	0.231
$\mu_c$	0.1067	0.3558
$\rho$	5.279	1.673
$\theta$	1.8919	1.577
$\sigma$	1.703	1.509
$c$	11.6	10.563
erro	0.4658	0.0445

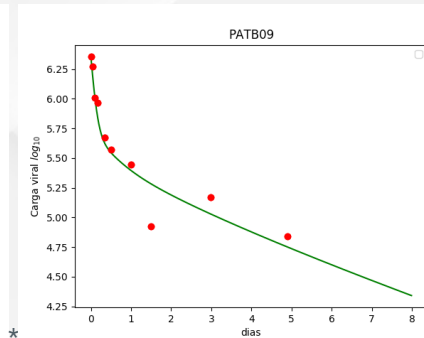
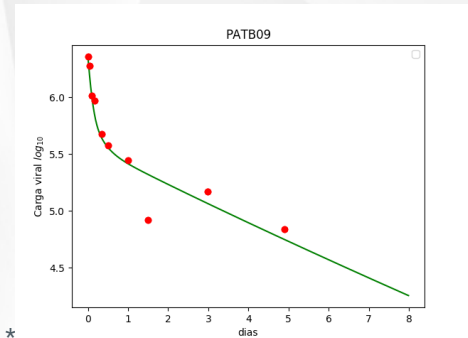


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.4758	0.16
$\epsilon_\alpha$	0.905	0.775
$\epsilon_s$	0.5116	0.16
$\alpha$	23.92	29.7
$r$	0.699	4.85
$\delta$	0.063	0.178
$\mu_c$	0.111	0.448
$\rho$	13.83	13.524
$\theta$	1.809	1.611
$\sigma$	1.9634	1.872
$c$	11.712	12.47
erro	0.0494	0.04959

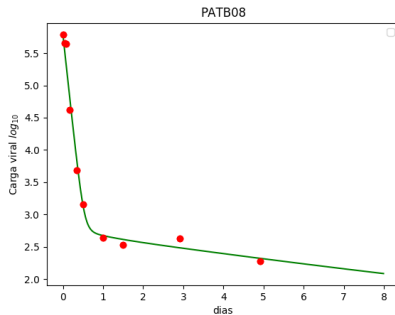
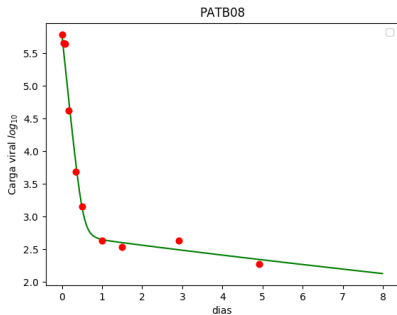




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parametros	1 teste	2 teste
$\epsilon_r$	0.7498	0.475
$\epsilon_\alpha$	0.453	0.566
$\epsilon_s$	0.963	0.935
$\alpha$	22.849	26.888
$r$	5.871	4.371
$\delta$	0.875	0.706
$\mu_c$	0.732	0.702
$\rho$	11.95	10.320
$\theta$	1.343	1.180
$\sigma$	1.393	1.676
$c$	11.169	11.482
erro	0.0717	0.0717

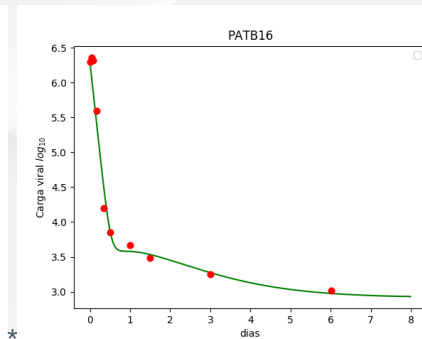
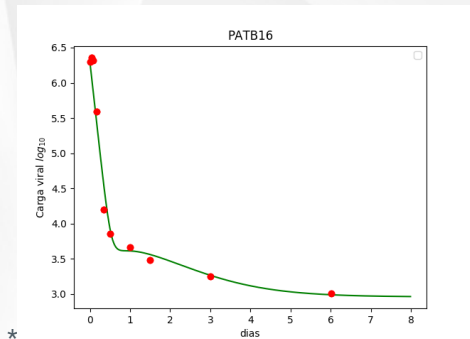


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.722	0.11
$\epsilon_\alpha$	0.679	0.654
$\epsilon_s$	0.293	0.173
$\alpha$	46.732	52.16
$r$	4.328	3.098
$\delta$	0.0319	0.11
$\mu_c$	0.973	1.645
$\rho$	12.094	14.463
$\theta$	1.74	1.689
$\sigma$	1.506	1.59
$c$	10.00	10.025
erro	0.0995	0.0996

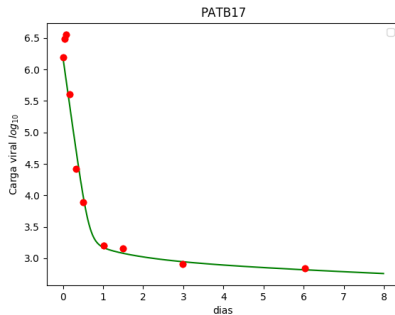
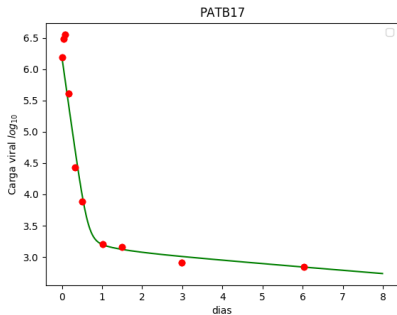


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.211	0.464
$\epsilon_\alpha$	0.959	0.8978
$\epsilon_s$	0.788	0.9125
$\alpha$	32.7	50.52
$r$	2.388	3.448
$\delta$	0.0997	0.103
$\mu_c$	0.232	1.792
$\rho$	6.729	7.589
$\theta$	1.44	1.766
$\sigma$	1.893	1.797
$c$	10.18	10.16
erro	0.0741	0.07416

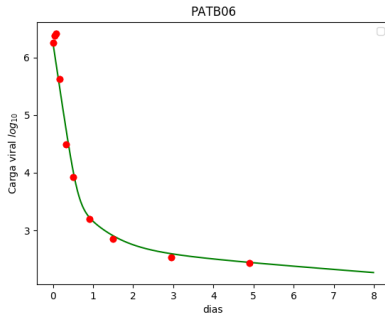
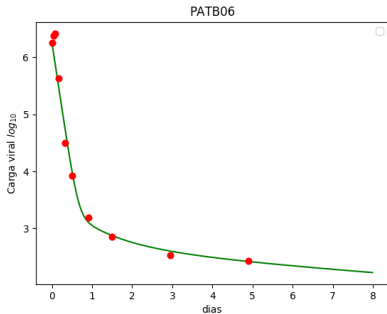


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.103	0.368
$\epsilon_\alpha$	0.773	0.768
$\epsilon_s$	0.33	0.397
$\alpha$	58.68	58.4
$r$	2.5698	4.475
$\delta$	0.3005	0.284
$\mu_c$	0.837	1.194
$\rho$	9.111	13.78
$\theta$	1.207	1.783
$\sigma$	1.477	1.371
$c$	10.005	10.04
erro	0.077	0.0773

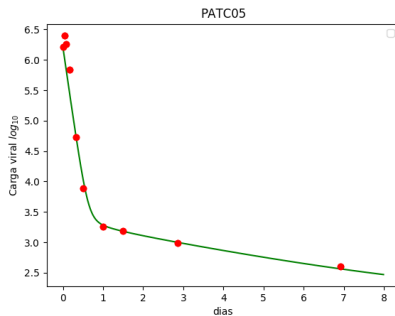
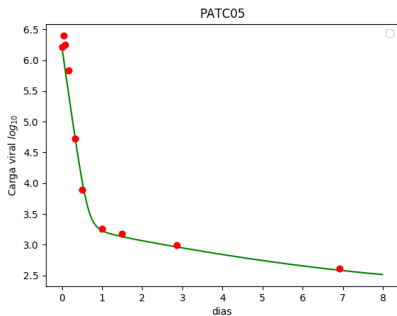




Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.12	0.559
$\epsilon_\alpha$	0.972	0.907
$\epsilon_s$	0.857	0.137
$\alpha$	25.25	24.52
$r$	7.671	4.85
$\delta$	0.245	0.109
$\mu_c$	0.364	0.646
$\rho$	14.23	8.296
$\theta$	1.4	1.394
$\sigma$	1.32	1.047
$c$	10	10.025
erro	0.0643	0.066

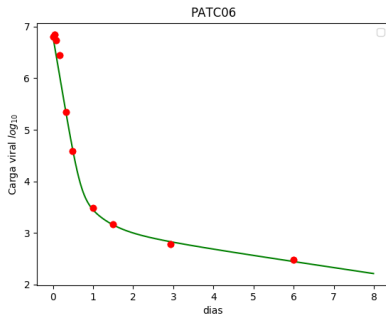
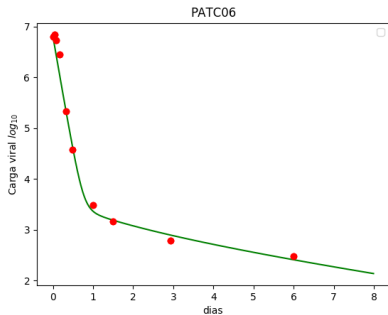


Table: Parametros das DEs

parametros	1 teste	2 teste
$\epsilon_r$	0.376	0.376
$\epsilon_\alpha$	0.718	0.585
$\epsilon_s$	0.166	0.328
$\alpha$	56.77	39.36
$r$	2.703	3.804
$\delta$	0.834	0.774
$\mu_c$	1.584	1.178
$\rho$	6.86	13.599
$\theta$	1.94	1.491
$\sigma$	1.84	1.791
$c$	10.09	10
erro	0.07216	0.07326

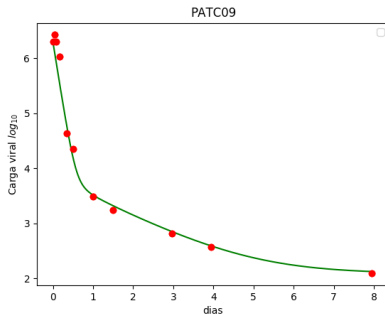
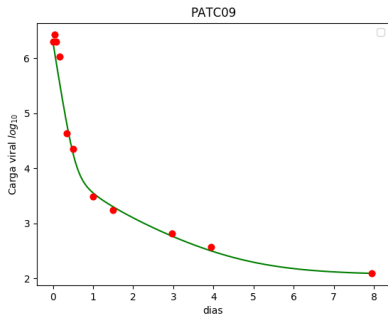


Table: Parametros das DEs

e parametros	1 teste	2 teste
$\epsilon_r$	0.84	0.893
$\epsilon_\alpha$	0.826	0.759
$\epsilon_s$	0.231	0.961
$\alpha$	39.19	27.47
$r$	2.553	4.44
$\delta$	0.088	0.0133
$\mu_c$	0.332	1.419
$\rho$	14.31	14.11
$\theta$	1.22	1.489
$\sigma$	1.038	1.515
$c$	12.18	11.56
erro	0.06233	0.06197

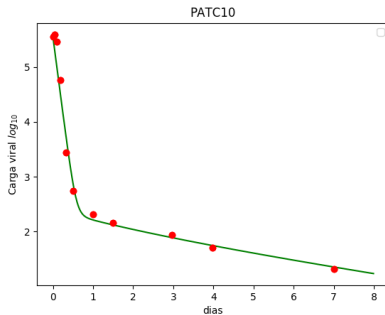
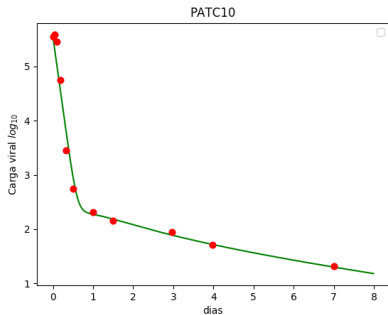


Table: Parametros da DE sem t=1

parametros	teste 1	teste 2	<b>teste</b>
$\epsilon_r$	0.6	0.599	0.357
$\epsilon_\alpha$	0.76	0.579	0.295
$\epsilon_s$	0.95	0.964	0.684
$\alpha$	20.6	22.67	30.49
$r$	0.54	1.846	0.5775
$\delta$	0.15	0.3327	0.224
$\mu_c$	0.66	1.779	1.186
$\rho$	4.99	8.435	12.477
$\theta$	1.3	1.564	1.442
$\sigma$	1.27	1.394	1.28
$c$	11.4	11.857	12.38
erro	0.0647	0.064	0.073

