

LSNReviews

From: Oleg Povetko [opovetko@cnwra.swri.edu]
Sent: Saturday, April 05, 2008 6:16 PM
To: natalex
Subject: RE: Peroxide Production Results

v spreadsheet pod zakladkoj "Doses for Radiolysis " vstav' sverxu, dlya kakoj sborki eti raschety, MAXIMUM ili AVERAGE.

From: natalex [mailto:natalex@telus.net]
Sent: Saturday, April 05, 2008 2:20 PM
To: 'Oleg Povetko'
Cc: 'Oleg Povetko'
Subject: RE: Peroxide Production Results

Я исправил файлы:

Peroxide Production in Inert Gas Atmosphere Report March 2008 Radiolises 05 April.doc
Peroxide Production in Inert Gas Atmosphere Report March 2008 Radiolises 05 April.xls

Окончательные таблички:

Peroxide Accumulation in Central Assembly:

Years	sec	molecules/sec	g/sec	ln(sec)	ln(g/sec)	Peroxide Accumulation (g)
5	1.57788E+08	1.89203E+15	1.05954E-07	18.87676292	16.0602655	0
10	3.15576E+08	7.10027E+13	3.97615E-09	19.5699101	19.3429514	3.664224
30	9.46728E+08	3.21762E+13	1.80187E-09	20.66852239	20.1344427	4.945998
100	3.15576E+09	6.02008E+12	3.37124E-10	21.87249519	21.8105694	6.879384

Vapour Density Correspondence 4 TORR [kg/m³] 0.003817604 for T= 30
Vapour Density Correspondence 4 TORR [g/cm³] **3.8176E-06**
N2 [kg/m³] 1.122549084
N2 [g/cm³] 0.001122549

Ratio=(Correspondence 4 Torr)/(Vapour Density from MCNP Input) **3.81627E-03**

Ratio= (TAD Canister Active Vapour Volume) / Assembly Active Vapour Volume **21**

**Peroxide
Production
Rate &
Accumulation
in TAD
Canister:**

Years	sec	moleculs/sec	moles/sec	Peroxide Accumulation (Moles)
			2.51788E-	
5	1.57788E+08	1.51630E+14	10	0.00000E+00
			9.44892E-	
10	3.15576E+08	5.69027E+12	12	8.70765E-03
			4.28195E-	
30	9.46728E+08	2.57865E+12	12	1.17537E-02
			8.01141E-	
100	3.15576E+09	4.82459E+11	13	1.63482E-02

Я дома, звони, если что.

Алексей.

From: Oleg Povetko [mailto:povetkooleg@hotmail.com]
Sent: Saturday, April 05, 2008 10:58 AM
To: natalex
Subject: RE: Peroxide Production Results

Dlya kakogo ob'ema zdes' "g/sec"?

From: natalex@telus.net
 To: povetkooleg@hotmail.com
 CC: opovetko@cnwra.swri.edu
 Subject: Peroxide Production Results
 Date: Fri, 4 Apr 2008 15:10:48 -0700

Peroxide Production Results are at your Folder (Excel and Word)

The final Table is:

Table ... Peroxid Accumulation

Time Years	Peroxide Production Rate g/sec	Peroxide Accumulation g
5	1.05954E-07	0
10	3.97615E-09	3.664224
30	1.80187E-09	4.945998
100	3.37124E-10	6.879384

* Peroxide accumulation data in vapour space of the central assembly calculated for the H₂O Vapour Density = **1.00035E-03** g/cm³; To recalculate Peroxide accumulation for other densities, just multiply data from column "Peroxide Accumulation" on to the **Ratio**:

$$\text{Ratio} = \text{Real H}_2\text{O Vapour Density (g/cm}^3\text{)} / 1.00035\text{E-}03;$$

Alexei