Inspection of a reputable dictionary informs us that the word 'Absurd' means utterly or obviously senseless, illogical, or untrue; contrary to all reason or common sense; laughably foolish or false. Rather a strong word to use one would suggest in a review. Let us see whether this word is appropriate. Let us consider another limiting system where ozonolysis of an alkene only produces excited ('hot') criegee biradicals ($CB^*$), denoted by reaction (1).

$O_3$ + alkene $\rightarrow$ $CB^*$ (1)

These 'hot' $CB^*$ can then either be quenched in reaction (2) by $H_2O$ to form 'cold' CB or decompose to form products B in reaction (4), whilst 'cold' CB can react with $H_2O$ to form product A in reaction (3).

$CB^* + H_2O \rightarrow CB + H_2O$ (2)
$CB + H_2O \rightarrow A$ (3)
$CB^* \rightarrow B$ (4)

$$\frac{d[CB^*]}{dt} = k_1[O_3][alkene] - k_2[CB^*][H_2O] - k_4[CB^*] \quad \textbf{I}$$

Assuming the steady state approximation $[CB^*] = \frac{k_1[O_3][alkene]}{k_2[H_2O] + k_4}$ **II**

$$\frac{d[CB]}{dt} = k_2[CB^*][H_2O] - k_3[CB][H_2O] \quad \textbf{III}$$

Assuming the steady state approximation $[CB] = \frac{k_2[CB^*]}{k_3}$ **IV**

$$\frac{d[A]}{dt} = k_3[CB][H_2O] = \frac{k_3k_2[CB^*][H_2O]}{k_3} = k_2[CB^*][H_2O] = \frac{k_2k_1[O_3][alkene][H_2O]}{k_2[H_2O] + k_4} \quad \textbf{V}$$

$$\frac{d[B]}{dt} = k_4[CB^*] = \frac{k_4k_1[O_3][alkene]}{k_2[H_2O] + k_4} \quad \textbf{VI}$$

**Combining V and VI**

$$\frac{d[A]}{d[B]} = \frac{k_2k_1[O_3][alkene][H_2O]}{k_2[H_2O] + k_4} \times \frac{k_2[H_2O] + k_4}{k_4k_1[O_3][alkene]} = \frac{k_2[H_2O]}{k_4} \quad \textbf{VII}$$

If we wish to look at the yield of A, one could look at $yield(A) = \frac{\frac{d[A]}{dt}}{\frac{d[B]}{dt} + \frac{d[A]}{dt}}$ **VIII**

and this gives the yield (A) = $\frac{k_2[H_2O]}{k_2[H_2O]+k_4}$

The analysis is valid, yes the $k_2$ is associated with quenching and not bimolecular reaction but we do not need to distinguish between ‘hot’ and ‘cold’, whatever definition J.-F. Muller is using, just the fraction that decomposes as a function of [$H_2O$]. As [$H_2O$] increases so more $CB^*$ is quenched and more A can be formed from reaction (3), the approximation is far from absurd.