
Standard Diffusion Approximation in Spatial Frequency Domain

Calculate normalized diffuse SFD reflectance (R_d) with the standard diffusion approximation. DIFF_APPROX_SFD returns diffuse reflectance from a homogeneous medium with absorption $\mu_a[mm^{-1}]$ and reduced scattering coefficients $\mu'_s[mm^{-1}]$, refractive index $n[unitless]$ and spatial frequency $f_x[mm^{-1}]$.

```
function Rd = diffApproxSDA(mua,musp,n,fx)

%
% $$R_d(k) = \frac{1}{2}$$
%

kx = 2*pi*fx;
Reff = 0.0636*n+0.668+(0.71/n)-(1.44/(n^2));
A = (1-Reff)/(2*(1+Reff));
a = musp./(mua+musp);
mueff = ((3*mua.*(mua+musp)) + kx^2).^(1/2);

num = 3*A*a;
den1 = (mueff./(mua+musp)) + 1;
den2 = (mueff./(mua+musp)) + 3*A;
Rd = num./(den1.*den2);
end
```

Not enough input arguments.

Error in diffApproxSDA (line 17)

```
kx = 2*pi*fx;
```

Published with MATLAB® R2018a