

```
# Helper function returning tidied eigenvalue array for a matrix
.spectrum_matrix <- function(P, components, norm_order, singular, order, digits = 4){
  # For singular values, take P as product of the itself and its tranpose
  if(singular){P <- P %*% t(P)}
  # Get the eigenvalues of P
  eigenvalues <- eigen(P, only.values = TRUE)$values
  # Take the square root of the eigenvalues to obtain singular values
  if(singular){eigenvalues <- sqrt(eigenvalues)}
  # Sort the eigenvalues to make it an ordered spectrum
  eigenvalues <- .sortValues(eigenvalues, norm_order)
  # If uninitialized, select all orders; otherwise, use c() so singletons => vectors
  if(class(order) == "logical"){order <- 1:nrow(P)} else{order <- c(order)}
  # Return the spectrum of the matrix
  purrr::map_dfr(order, .resolve_eigenvalue, eigenvalues, components, digits)
}
```