Plotting Examples

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Figure 1A. Bipartite Network for Cleaning Products and their Chemical Ingredients

(A) The cleaning products reported using in two areas (left column), together with the hazardous chemical ingredients that are known to be present in the cleaning products (right column). Each chemical ingredient is linked to the cleaning product that contain it, forming a bipartite network.

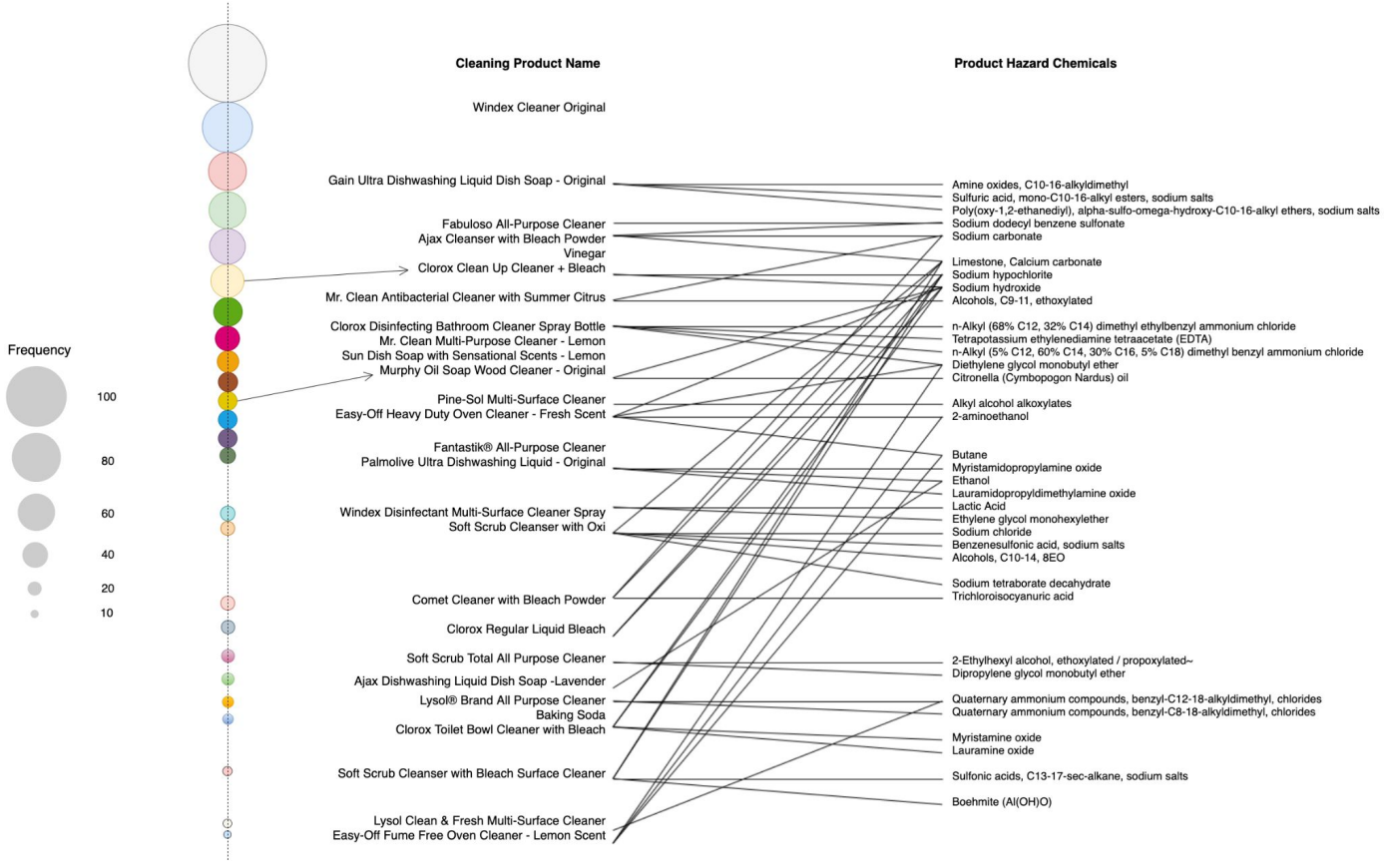


Figure 1B. Bipartite Network for Cleaning Products and their Chemical Ingredients in Kitchen

(B) The cleaning products reported using in the kitchen area (left column), together with the hazardous chemical ingredients that are known to be present in the cleaning products (right column). Each chemical ingredient is linked to the cleaning product that contain it, forming a bipartite network.

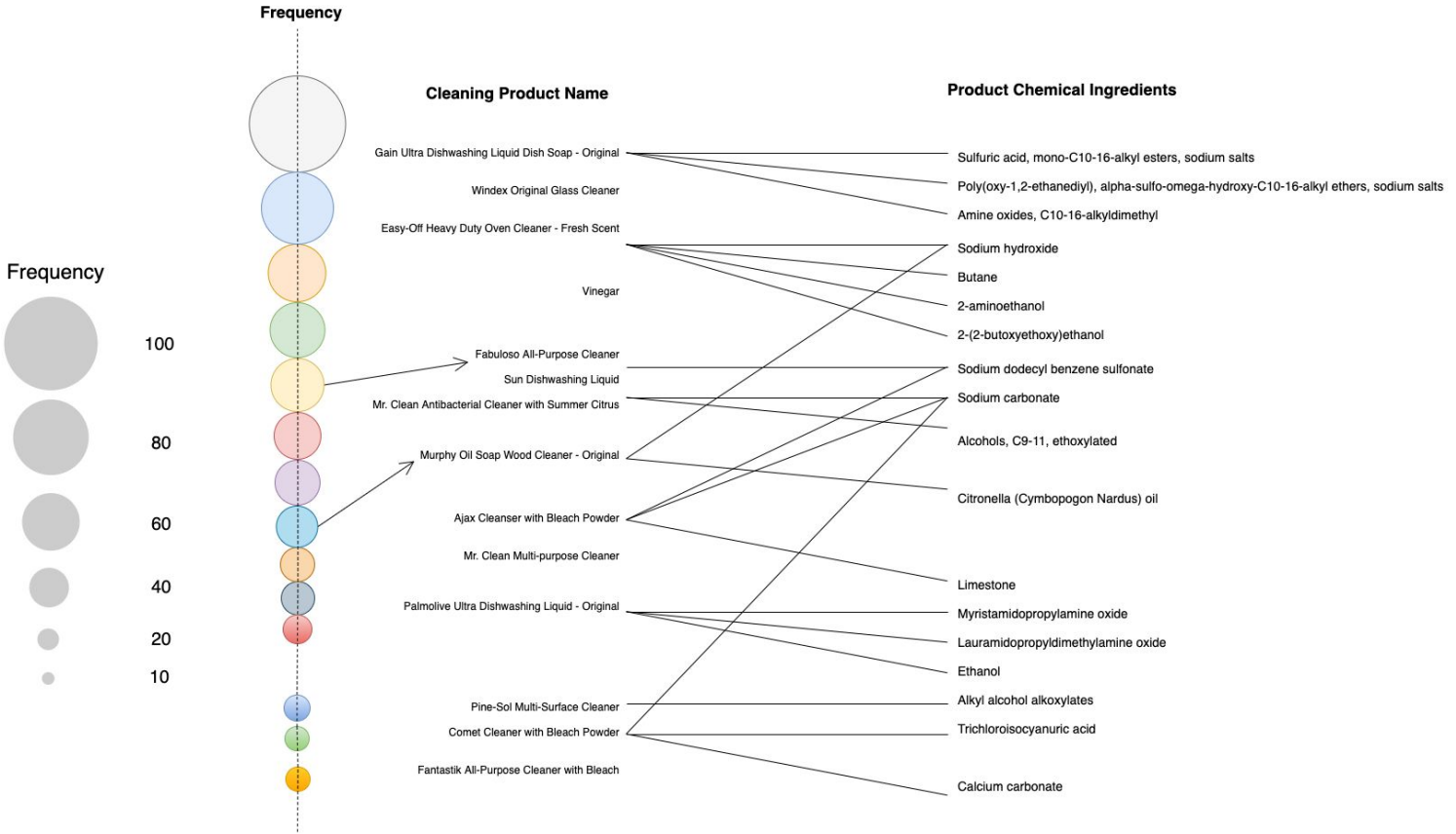


Figure 1C. Bipartite Network for Cleaning Products and their Chemical Ingredients in Bathroom

(C) The cleaning products reported using in the bathroom area (left column), together with the hazardous chemical ingredients that are known to be present in the cleaning products (right column). Each chemical ingredient is linked to the cleaning product that contain it, forming a bipartite network.

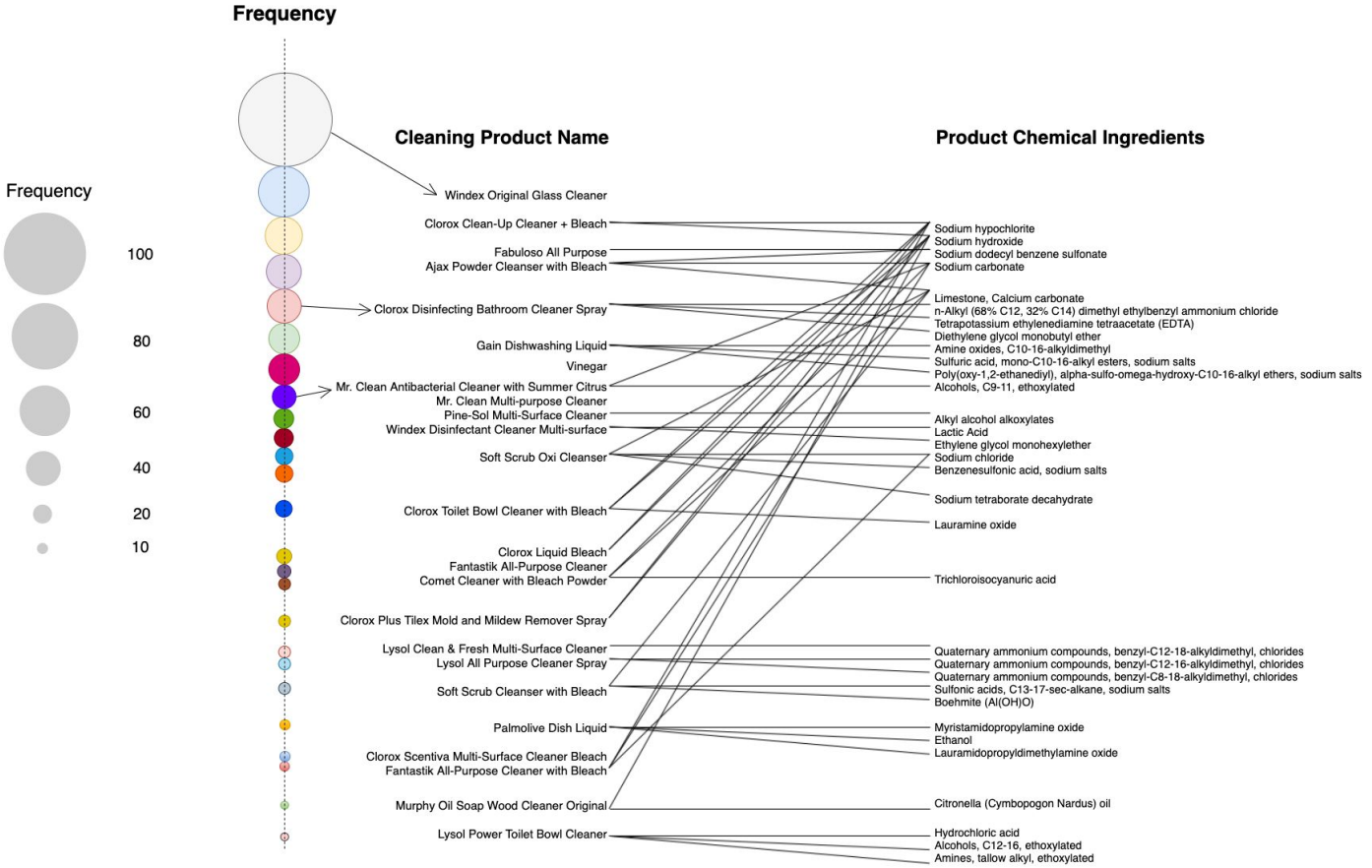
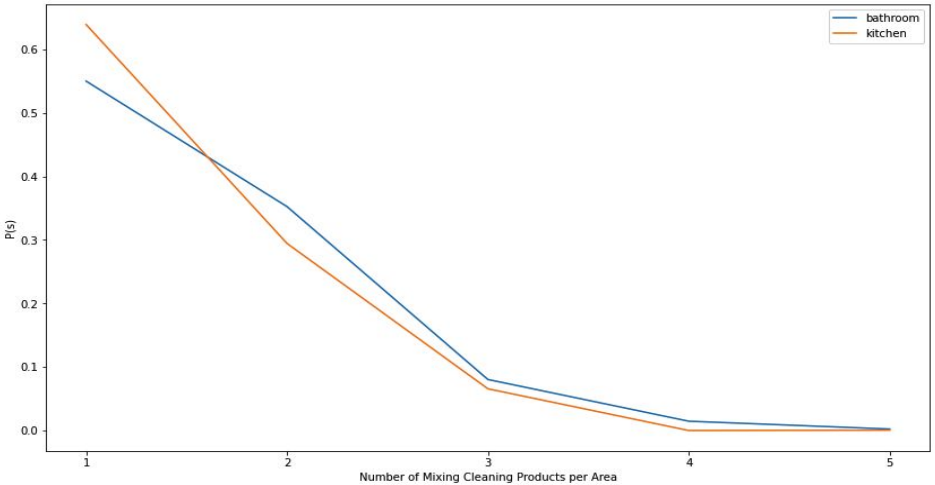


Figure 1D & 1E. Distribution of Number of Cleaning Products in Each Area

(D) (Left) The distribution of number of cleaning products used in 2 main areas, kitchen and bathroom.
(E) (Right) The distribution of number of cleaning products used in 12 sub areas across two main areas, kitchen and bathroom.



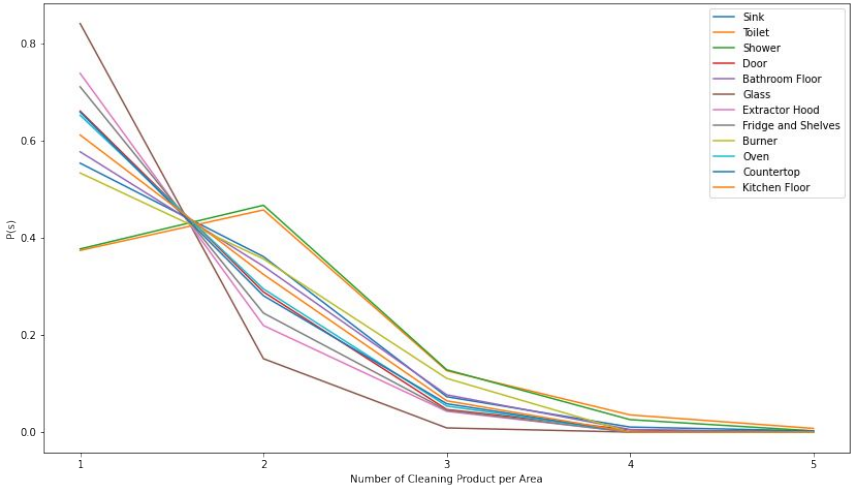
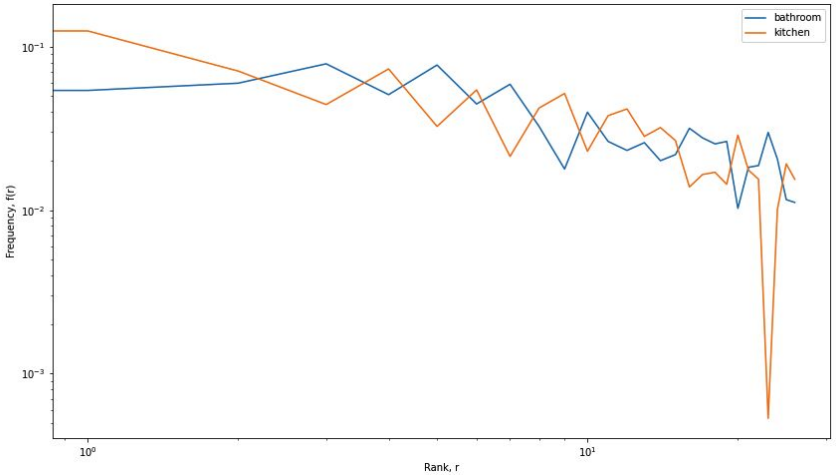


Figure 1F & 1G. The Frequency-Rank Plot for Cleaning Product Usage Across Areas

(F) (Left) The frequency-rank plot of cleaning products across the 2 main areas, kitchen and bathroom, show an approximately invariant distribution across areas.
(G) (Right) The frequency-rank plot of cleaning products across the 12 sub areas show an approximately invariant distribution across 2 main areas, kitchen and bathroom.



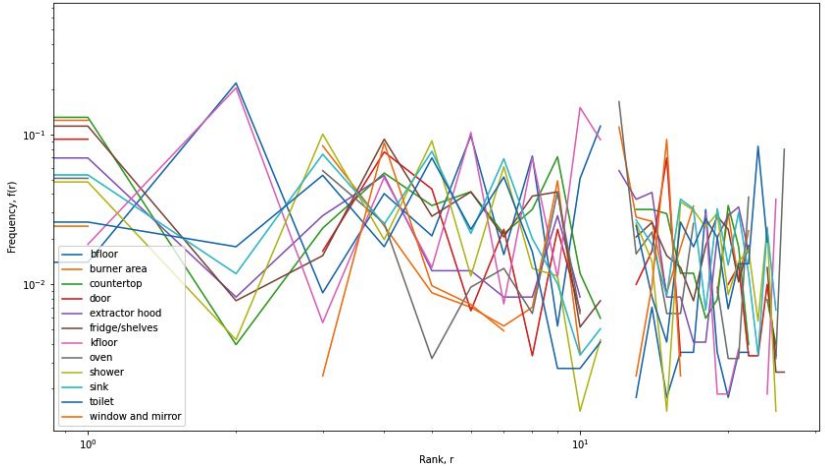


Figure 2A. Chemical Network

(A) If we project the product-chemical bipartite network into the product space, we obtain the *chemical network*, whose nodes are cleaning products, linked if they share at least one chemical ingredient. The thickness of links represents the number of chemical ingredients two cleaning products shared and the size of each circle corresponds to the Frequency of the cleaning product reported using.

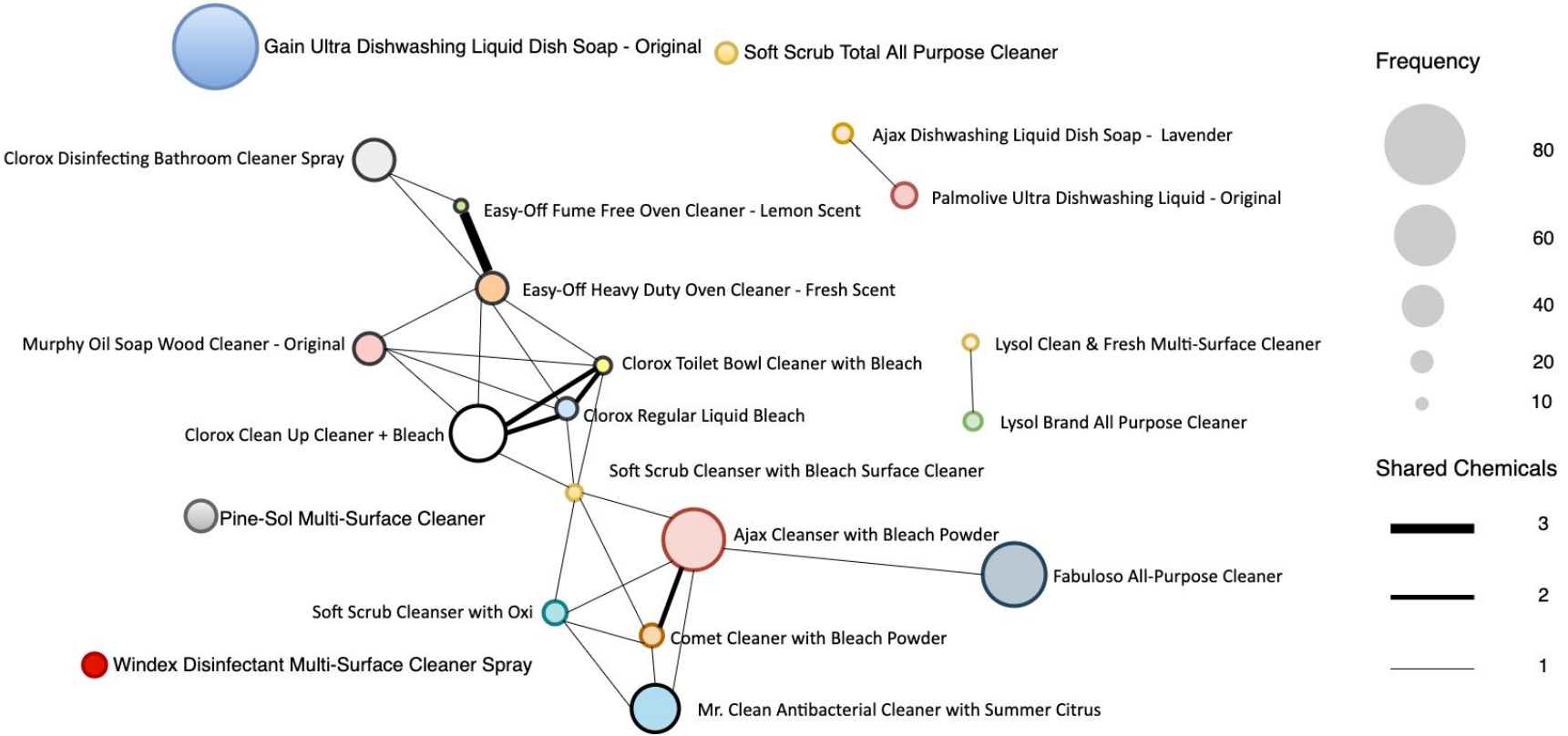


Figure 2B. The Backbone of the Chemical Network

(B) Each node denotes a cleaning product, the node color indicates category and node size reflects the ingredient frequency. Two cleaning products are connected if they share any chemical ingredients, link thickness representing the number of shared ingredients between the two products. We used the full network in our measurements.

Figure 3A & 3B. Example of Different Number of Shared Chemical Ingredients in Product Pairs

Schematic illustration of two products used as a pair, the first sharing most (A) and the second shared the least (B) chemical ingredients in our network.

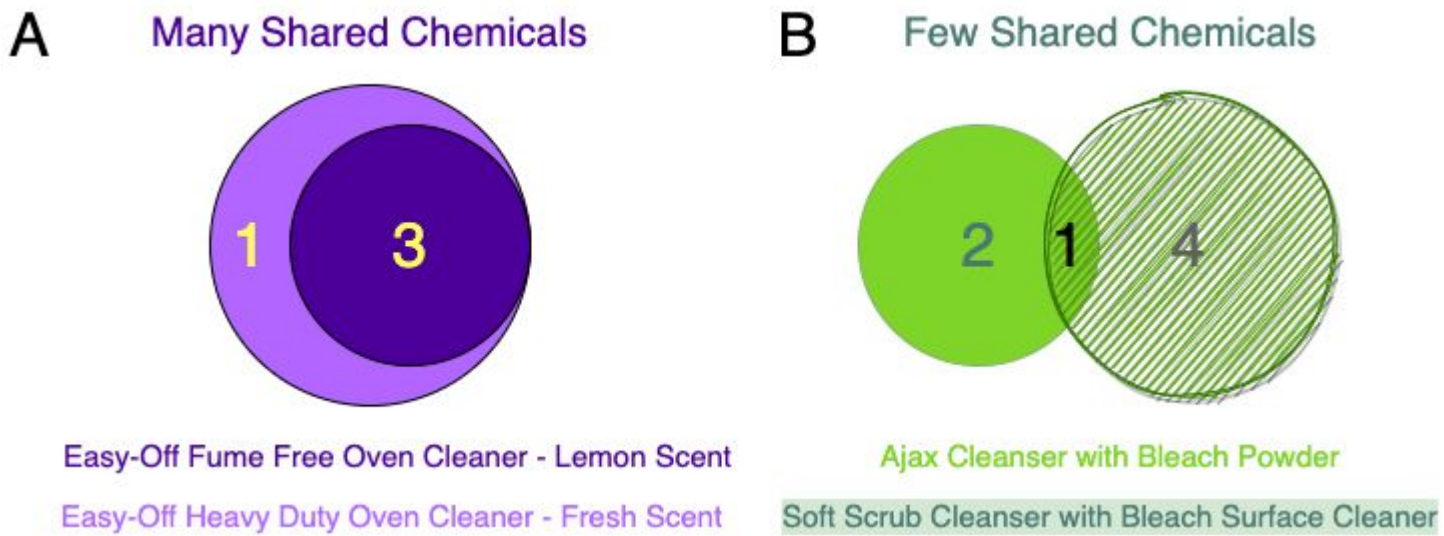


Figure 4A. Chemical Pyramid in the Kitchen

(A) Chemical pyramids for cleaning products used in the kitchen. The flavor pyramid shows the six most “authentic” single use cleaning products and ingredient pairs, selected by the largest frequency. The size of the nodes reflects the prevalence of the cleaning products in this area. Each color represents the category of the cleaning product (see Fig. 2B for the color) and link thickness indicates the number of shared chemical ingredients. No link indicates that there is no shared chemical ingredient between the pairs.

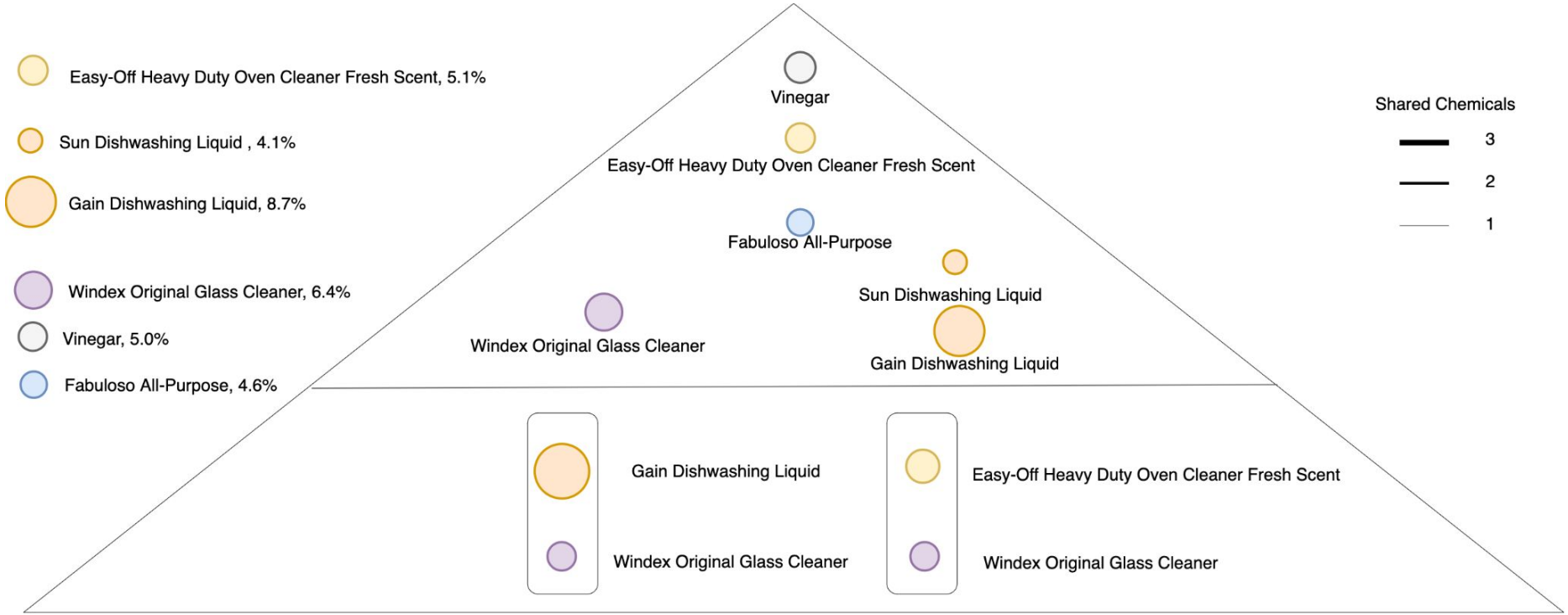


Figure 4B. Chemical Pyramid in the Bathroom

(B) Chemical pyramids for cleaning products used in the bathroom. The flavor pyramid shows the six most “authentic” single use cleaning products and ingredient pairs, selected by the largest frequency. The size of the nodes reflects the prevalence of the cleaning products in this area. Each color represents the category of the cleaning product (see Fig. 2B for the color) and link thickness indicates the number of shared chemical ingredients. No link indicates that there is no shared chemical ingredient between the pairs.

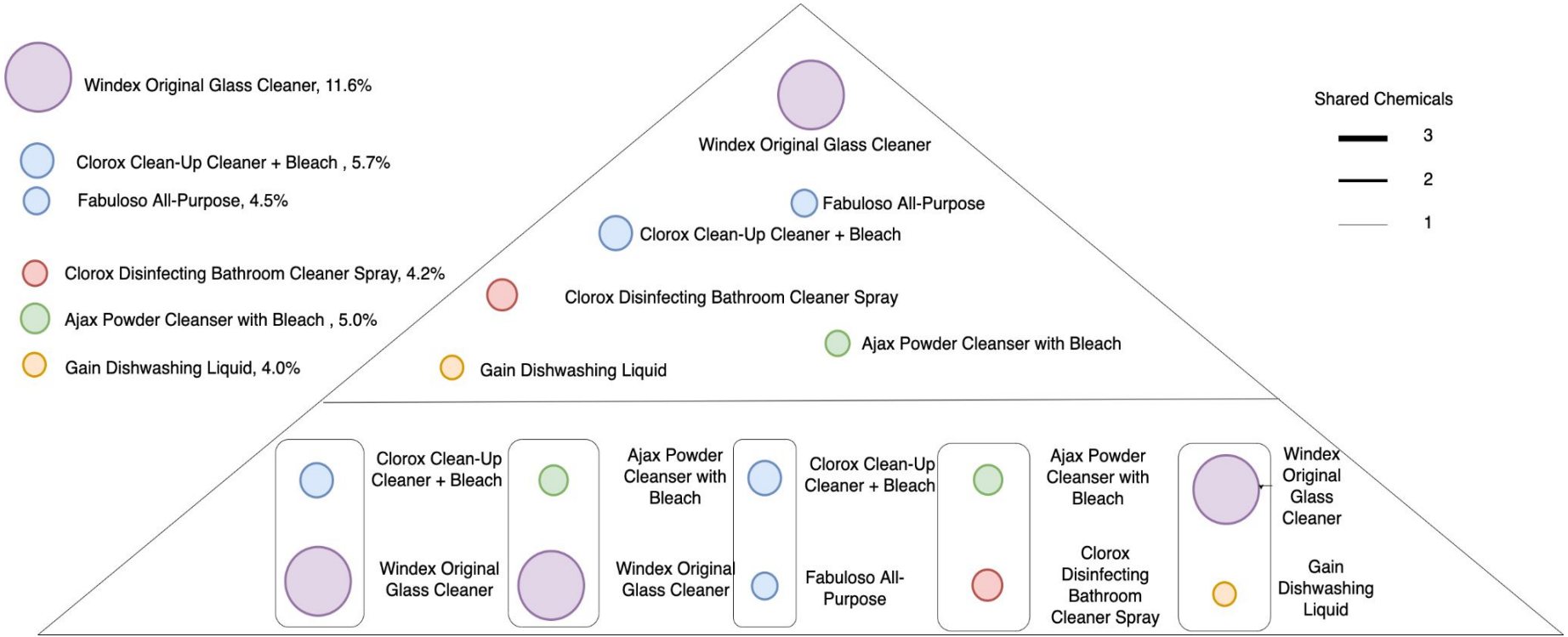


Figure 4C. Co-occurrence in Cleaning Areas

(C) The six most “authentic” single use cleaning products and cleaning product pairs used in specific area. Node color represents area and the link weight reflects the relative prevalence of the ingredient pairs.