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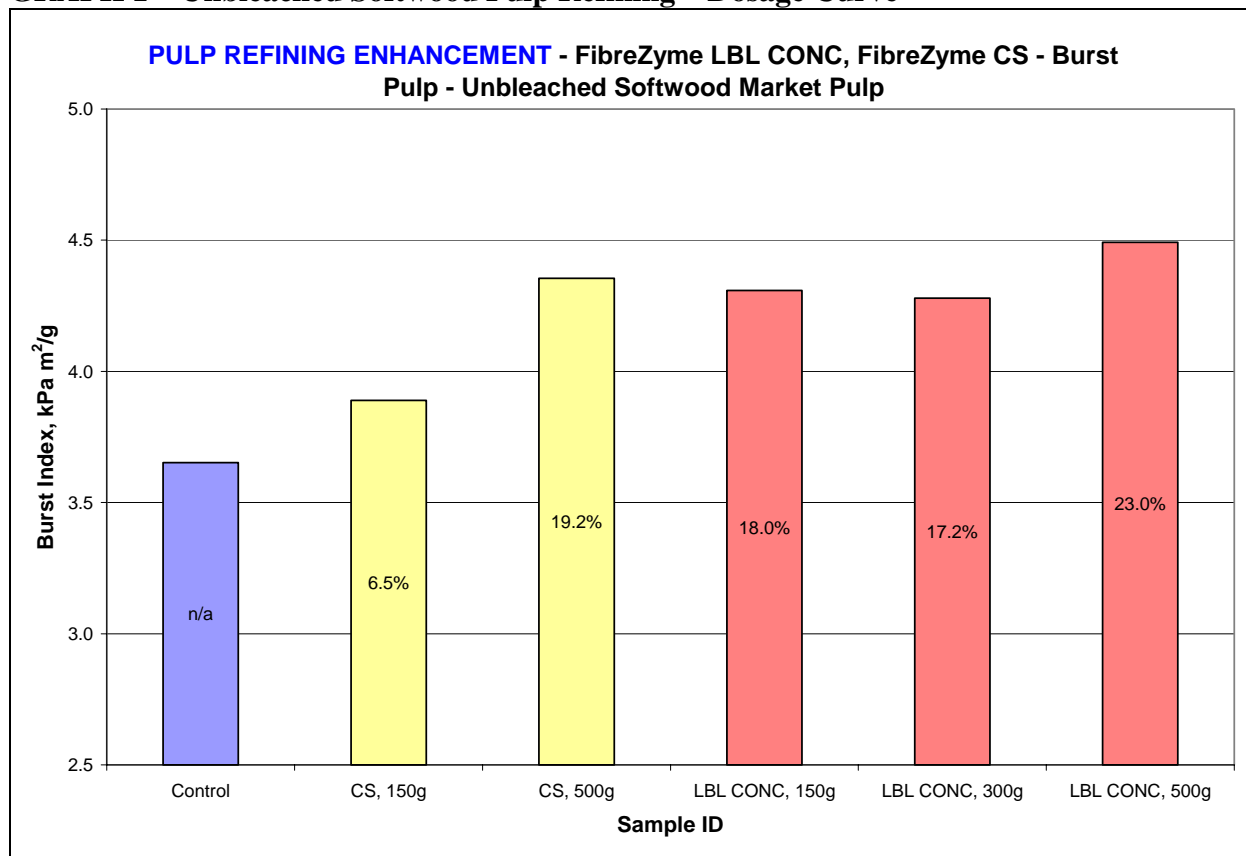
FibreZyme™ LBL CONC Lab Applications Summary

April 11, 2009

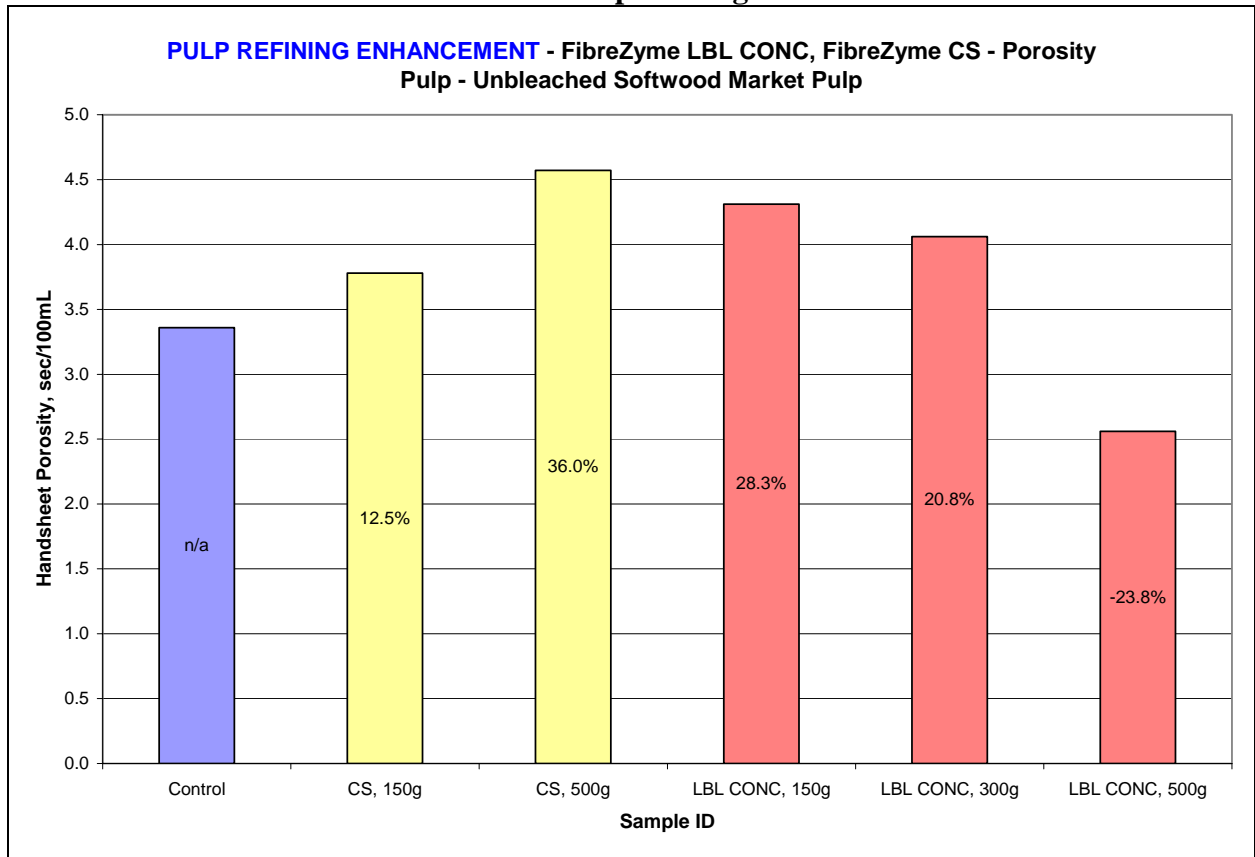
Enzyme Product Introduction and Summary for Pulp and Paper

Dyadic International introduces **FibreZyme LBL CONC**, a specially designed xylanase/cellulase enzyme complex, for use on pulps containing higher contents of xylan. Pulps that contain higher contents of xylan include unbleached softwood pulp (Graphs 1, 2 and 3) and bleached/unbleached hardwood pulps (Graphs 4 and 5). This product is approximately 2.5 to 3.5 times more effective per kilogram of enzyme when compared to Dyadic's FibreZyme CS product. **FibreZyme LBL CONC** is suitable for operating within a broad range of pH (6.0 to 8.0) and temperature 25°C to 60°C (77°F to 140°F). The recommended dosage is between 50 and 200 g/ton depending on the pulp type, pH, temperature and retention time conditions. Please refer to the product information bulletin for more information about FibreZyme LBL CONC.

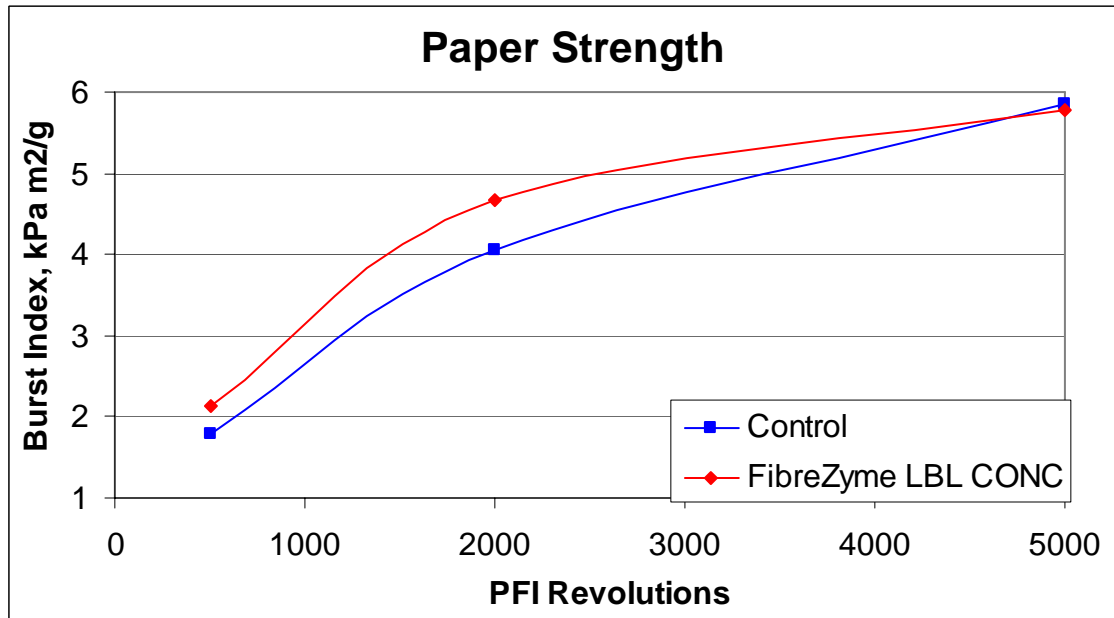
GRAPH 1 – Unbleached Softwood Pulp Refining – Dosage Curve



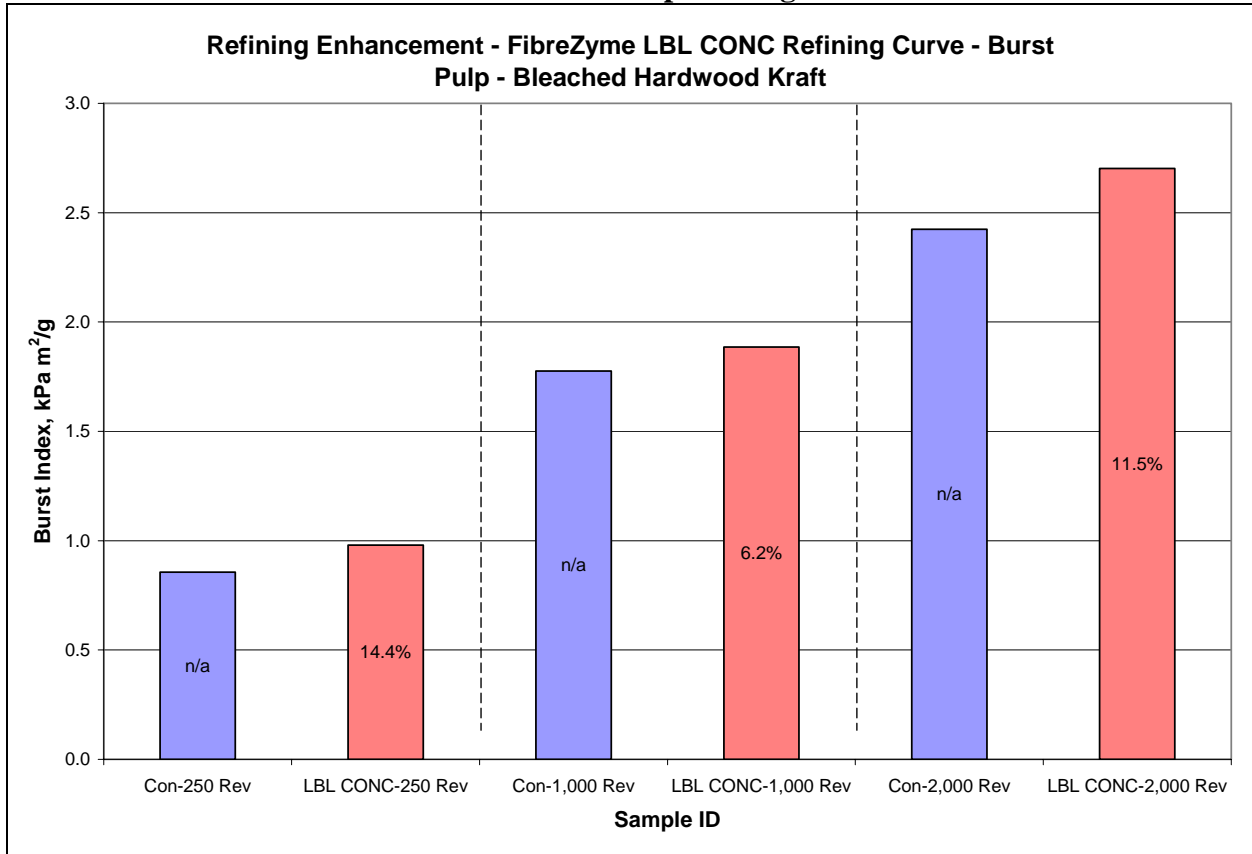
GRAPH 2 – Unbleached Softwood Kraft Pulp – Dosage Curve



GRAPH 3 – Unbleached Softwood Kraft – Refining Curve at 200 g LBL CONC/ton



GRAPH #4 – Bleached HARDWOOD Kraft Pulp at 150 g LBL CONC/ton



GRAPH #5 – BLEACHED HARDWOOD KRAFT at 150 g LBL CONC/ton

