GUM SELECTION GUIDELINE

PEKTOS AG
Know-How & Experience

START

WHAT IS THE GUM'S MAIN FUNCTION?
1. THICKENING OR VISCOSITY
2. PARTICULATE SUSPENSION
3. GELLING
4. PROTEIN STABILIZATION

#1 → *STARCH, CMC, GUAR, LBG, PGA, XANTHAN GUM, PECTIN, CARRAGEENAN*

IS IT A MILK BASED SYSTEM?
- NO → LOW-pH SYSTEM?
  - NO → IS TRANSPARENCY A LARGE CONCERN?
    - YES → *LBG or CMC*
    - NO
  - YES → *XANTHAN GUM, PECTIN, PGA, LBG*
- YES → pH OF FINAL PRODUCT?
  - ABOVE IEP → *CARRAGEENAN*
  - BELOW IEP → *PECTIN TO STABILIZE, CARRAGEENAN TO THICKEN*

#2 → *XANTHAN GUM, PGA, LM PECTIN, CARRAGEENAN, MCC*

#3 → PRESENCE OF SIGNIFICANT AMOUNTS OF PROTEIN?
- YES → pH OF FINAL PRODUCT?
  - ABOVE IEP
  - BELOW IEP → *PECTIN TO STABILIZE, CARRAGEENAN TO GEL*
- NO → SOLUBLE SOLIDS OF FINAL PRODUCT (BY R.I.)?
  - 0-20 BRIX → REQUIRED SHELF LIFE OF GELLED PRODUCT?
    - SEVERAL WEEKS → *LM PECTIN or CARRAGEENAN*
    - SEVERAL MONTHS → *CARRAGEENAN*
  - 20-80 → pH OF FINAL PRODUCT?
    - 5.0 – 8.0 → SHEAR REVERSIBILITY REQUIRED?
      - NO → *CARRAGEENAN*
      - YES → *IOTA CARRAGEENAN*
    - 2.0 – 5.0 → SHEAR REVERSIBILITY REQUIRED?
      - YES → *LM PECTIN*
      - NO → SOLIDS GREATER THAN 55%?
        - NO → *LM PECTIN*
        - YES → *HM PECTIN*

#4 → pH OF FINAL PRODUCT?
- BELOW IEP → *PECTIN*
- AROUND → *CMC*
- ABOVE IEP → *CARRAGEENAN*