

***Determining the  
Presence of Glucosidase  
Inhibitors in Juneberries (Amelanchier  
alnifolia) Chokecherries (Prunus  
virginiana) Blackhawberries (Viburnum  
prunifolium )  
BuffaloBerries (Shepherdia argentea)***

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- **Outline**

- What is Diabetes
- Who is Affected by it
- Glucosidase inhibitors
- Native Berries
- Methods

- **What is Diabetes**
- What are the different types of Diabetes
  - Type one
  - Type two
  - Type three

- **Who is Affected by Diabetes**
  - Currently 8% of Americans are affected
  - Among the Native Americans it is 2.2 times higher
  - It also affect different age class

- **The Increase in Diabetes Among Native Americans is due to what**
  - Change in Diets
  - Exercise
  - Obesity

- **Glucosidase inhibitors**

- What is Glucosidase?
- What are inhibitors?
- Why they are important?
- Where in the diet are these found?

- **Objective**

- Identification of glycosidase inhibitors in chokecherry, buffaloberry, blackhawk, and juneberry

- **Native Berries**
  - Traditional uses
  - Modern uses

- **Different Types of Berries**

- Juneberry (*Amelanchier alnifolia* )



- Chokecherry (*Prunus virginiana*)



- Blackhawberries (*Viburnum prunifolium* )



- Buffaloberry (*Shepherdia argentea*)



- **Methods**

- How berries were harvested
- What I will do with them
  - Glucosidase (amylase) Assay
  - Glucosidase (amylase) Inhibition Assay
  - HPLC (High-performance liquid chromatography)

- **Conclusion**

- What I am hoping to find is that there are different amount of glucosidase inhibitor in the berries and that they maybe useful in helping people with diabetes.

- **Does anyone have any questions**

## ● References

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