



November 23, 2020

**NORTECH, Inc.**

**RE: Portable Air Cleaners and Filtration**

The purpose of this memo is to discuss the use of portable air cleaners in the workplace, their effectiveness and shortcomings.

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**Accounting Office:**  
2400 College Rd  
**Fairbanks, AK 99709**  
907.452.5688  
907.452.5694 Fax

Portable air cleaners have become a popular appliance in homes and the workplace for over 20 years to help improve Indoor Air Quality (IAQ). Many air cleaners have been marketed as being the sole solution to resolve a variety of IAQ issues, this however is not the case. Portable Air Cleaners are not a substitute for source control and ventilation but may be useful when used in conjunction with these practices.

◆  
3105 Lakeshore Drive  
Suite A106  
**Anchorage, AK 99517**  
907.222.2445  
907.222.0915 Fax

The most effective way to improve IAQ is **source control** - reduce or remove the sources of indoor pollutants through routine and seasonal cleanings. The next effective means is to **ventilate the space** with clean outdoor air. Lastly, **portable air cleaners** (PACs) (also known as air purifiers) used to supplement the previous two practices, particularly when additional ventilation with outdoor air is not possible without compromising indoor comfort (temperature or humidity) or when outdoor air pollution is high.

◆  
5438 Shaune Drive  
Suite B  
**Juneau, AK 99801**  
907.586.6813  
907.586.6819 Fax

When selecting a PAC to supplement IAQ, select a model with the following characteristics.

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- Moves enough air for the intended space
  - Square foot rating
- Appropriate filtration
  - HEPA
  - MERV 16
- Consumables that are supported and readily available
  - Well known manufacturer
  - Product has positive market history

Devices capable of monitoring standard IAQ parameters (particle counts, VOC levels etc.) are ideal and should be a consideration when selecting a device. PACs should also be purchased from a company with a longstanding market presence in air purification and a history of long-term product support.

PAC's have potential to worsen air quality if used improperly. Existing particulates in a space (dusts, pollen, smoke, particles containing virus) may become airborne if a PAC is introduced without first cleaning the area – demonstrating the importance of source removal. PACs should also be positioned so the airflow is facing away from people, as they can carry particulates into a person breathing zone. Finally, a schedule for filter changes needs to be established in accordance with manufactures recommendations, or if unexpected “filter loading” has occurred.