Air & Water
Borne Diseases

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Respiratory Syncytial Virus (RSV) is considered the most common viral agent of lower respiratory tract infections in infants and young children. It is commonly involved in bronchiolitis and pneumonia in infants [1,2]. e virus infects the ciliated epithelial cells lining the airways, and their rapid destruction results in the symptoms characteristic of the infection, such as fever, rhinorrhea, cough and wheezing [3]. e highest morbidity rates are observed in infants, elderly and immuno compromised patients [4]. e virus classi ed within Pneumovirus genus of the Paramyxoviridae [5]. ere are two major antigenic groups of RSV, A and B with antigenic di erences on the N, F and G proteins [6]. Early diagnosis of RSV infections is necessary for monitoring of the infected infants, for prevention of nosocomial spread and in some cases to guide the choice of a possible adapted antivirus therapy [7]. Diagnosis of RSV can be made by virus isolation, detection of viral antigen, detection of viral RNA and demonstration of a rise in serum antibodies [8].

Viral isolation in cell cultures such as (HEp-2 cells and ATCC CCL-23) [9] is considered the (gold standard) method for diagnosis of RSV infection, it requires specimens to be transported and stored under ideal conditions and the prolonged turnaround time required to obtain results further diminishes its usefulness in patient management [10]. It has been demonstrated that RSV is a very labile virus and it loses its viability in transit [11]. To overcome this limitation, rapid techniques based on antigen detection by Direct Immuno Fluorescence (DIF) employing monoclonal antibodies is widely used for the diagnosis and subgroup of RSV into A and B [12]. Also Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) has been used increasingly to detect the virus in clinical samples [13]. e sensitivity of RT-PCR can equal or exceed that of cell culture or antigen-based assays [14].

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